TOSHIBA

FILE NO. 2B0-9905

SERVICE MANUAL

CORDLESS TELEPHONE

FT-8989

PUBLISHED IN JAPAN, Sep., 1999

CONTENTS

SAFETY PRECAUTIONS 1
OPERATING CONTROLS 2
ALIGNMENT PROCEDURE 3
BLOCK DIAGRAMS 9
SCHEMATIC DIAGRAMS 12
TROUBLESHOOTING HINTS 18
IC AND TRANSISTOR VOLTAGE CHART 25
SEMICONDUCTOR LEAD IDENTIFICATION 32
ELECTRICAL PARTS LOCATION 35
WIRING DIAGRAMS 38
EXPLODED VIEW AND MECHANICAL PARTS LIST 41
PARTS LIST 45
ASSEMBLY PARTS LIST 64
SPECIFICATIONS 65

SAFETY PRECAUTIONS

Before returning any models to the customer, a safety check of the entire instrument should be made. The service technician must be sure that no protective device built into the instrument by the manufacture has become defective or inadvertently degraded during servicing.

1.WARNING:

Alterations of the design or circuitry of these models should not be made.

Any design changes or additions such as, but not limited to, circuit modifications, auxiliary speaker jacks, switches, grounding, active or passive circuitry, etc. may alter the safety characteristics of these models and potentially create a hazardous situation for the user.

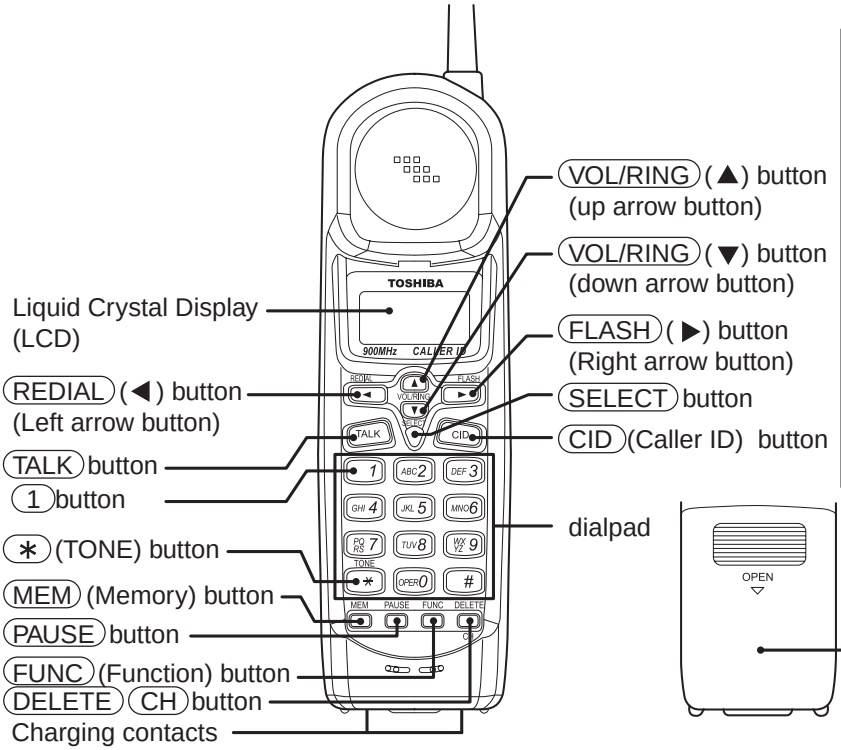
Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.

2.PRODUCT SAFETY NOTICE

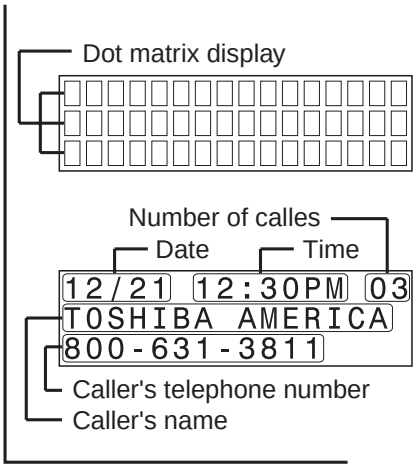
Many electrical and mechanical parts in this chassis have special characteristics. These characteristics often pass unnoticed and the protection afforded by them cannot necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts that have these special safety characteristics are identified in this manual and its supplements; electrical components having such features are indentified by a ⚠ in the schematic diagram and the parts list. Before replacing any of these components, read the parts list in this manual carefully. The use of substitute replacement parts that do not have the same safety characteristics as specified in the parts list may create shock, fire or other hazards.

OPERATING CONTROLS

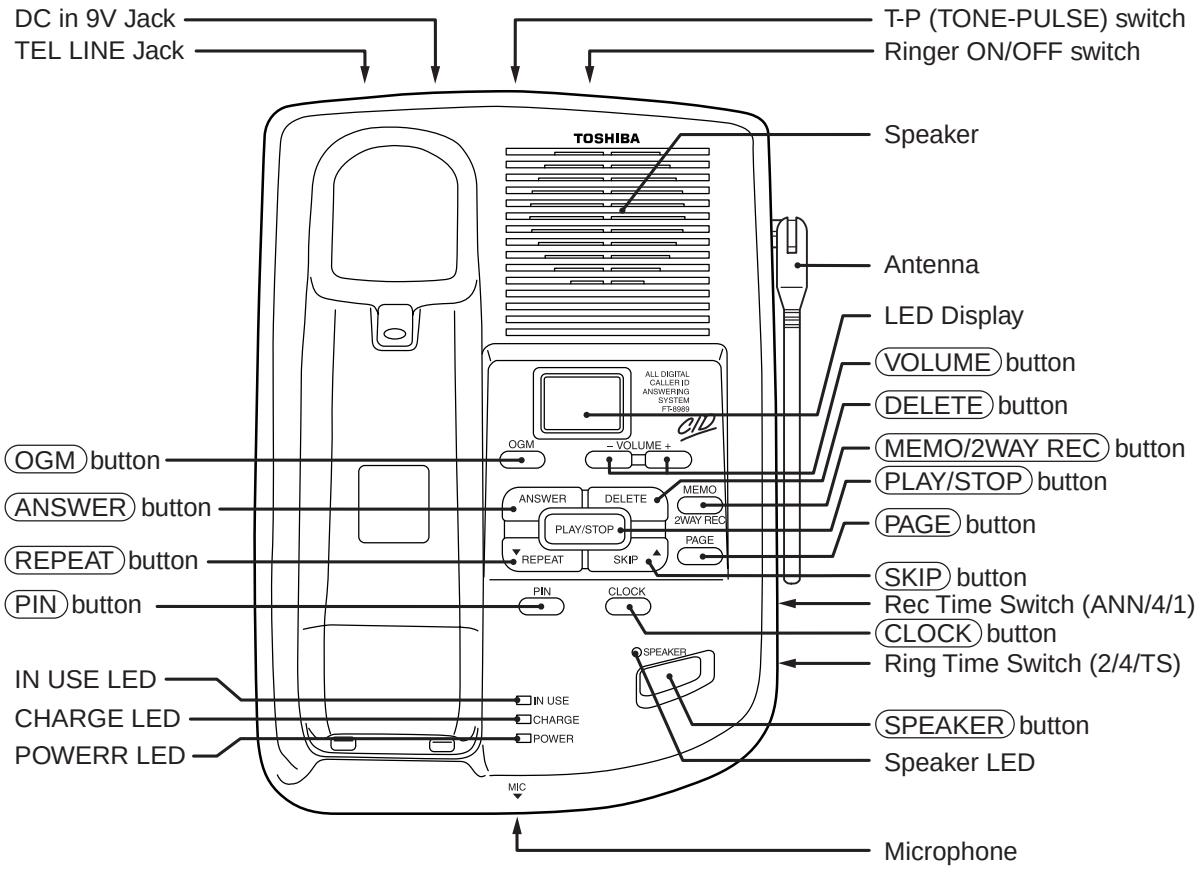
HANDSET CONTROLS AND FUNCTIONS



LCD



BASE UNIT CONTROLS AND FUNCTIONS



ALIGNMENT PROCEDURE

Test Mode For Base Unit

Press the “PAGE” key about 3.0 seconds while turning the power on.

1. To change the TEST mode: Press the “PAGE” key with T/P switch to PULSE position.
2. To change channel: Press the “PAGE” key with T/P switch to TONE position. If changing the step, the channel returns to the start channel.
3. To cancel Test mode: Bell rings, charge the Handset or Power off.

STEP	FUNCTION	START CH	TX CONT	TX MUTE	RX MUTE	RL CONT	REMARKS
1	VCO/TX FREQ. ADJ	19	L	L	L	L	
2	TX MODE CHECK	19	L	H	L	H	
3	TX DATA	19	L	L	L	L	*1
4	RX SENS.	19	H	L	H	H	
5	SQ SENS.	19	H	L	*A	H	
6	SINGLE TONE CHECK	19	H	L	L	H	
7	DUAL TONE CHECK	19	H	L	L	H	
8	DATA IN CHECK	19	H	L	L	L	*2
9	CHANNEL DATA CHECK	19	H	L	L	L	
10	DUPLEX	19	L	H	H	H	

*A : CHARGE LED is ON when SQ ON, CHARGE LED is OFF when SQ OFF.

*1 : “0000...” (250Hz) will be fed out continuously as transmitting data.

*2 : CHARGE LED lights when the received data are “0000...”.

Channel rotation

19⇨20⇨21⇨40⇨1⇨25⇨2⇨3.....24⇨26.....38⇨39⇨40

Test Mode For Handset Unit

To Perform the TEST mode, turn the power ON by pressing the " ∗ " and "#" buttons at the same time.
When entered the TEST mode, the bell rings and the unit enters TEST mode 1. (Refer to the follwing table.)

1. To change the TEST mode: Press the number key for the corresponding TEST mode.
   (Refer to the following table)
2. To change channel: Press "CH" key.
   (Note: If the step is changed, the channel return to the start channel.)
3. To cancel Test mode: Turn the power OFF, charge the Handset , or press the "TALK" key.

STEP	FUNCTION	KEY	START CH	TX CONT	SC	$\overline{\text{TX MUTE}}$	$\overline{\text{RX MUTE}}$	CONV	REMARKS
1	VCO/TX FREQ. ADJ	1	21	L	H	L	L	H	
2	TX MOD. CHECK	2	21	L	H	H	L	L	
3	TX DATA	3	21	L	H	L	L	L	*1
4	RX SENS	4	21	H	H	L	H	L	
5	SQ SENS	5	21	L	H	L	*A	L	
6	RECEIVE DATA CHECK	6	21	L	H	L	L	H	*2
7	BELL	7	21	H	L	L	L	H	*3
8	BATTERY LOW CHECK	8	21	H	L	L	L	H	*4
9	CHARGE CHECK	9	21	H	L	L	L	H	*5
10	DUPLEX	0	21	L	H	H	H	L	

*A : Squelch ON is H, or Squelch OFF is L.
*1 : In the TEST mode 3, "0000..." will be fed out continuously as transmitting data.
*2 : In the TEST mode 6, bell (2kHz, 2.2kHz) rings when the data received is "0000...".
*3 : In the TEST mode 7, bell rings with initial 2 tone (2kHz, 2.2kHz).
*4 : In the TEST mode 8, bell (2kHz, 2.2kHz) rings when P_BATLOW is "L".
*5 : In the TEST mode 9, bell (2kHz, 2.2kHz) rings when P_CHRGIN is "L"

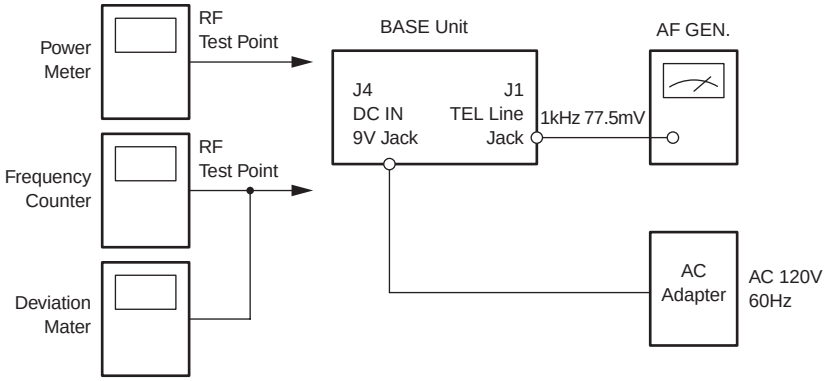
Channel rotation

21⇨20⇨19⇨40⇨1⇨25⇨2⇨3.....24⇨26.....38⇨39⇨40

Base Unit

Transmitter Section

Connections



Preset

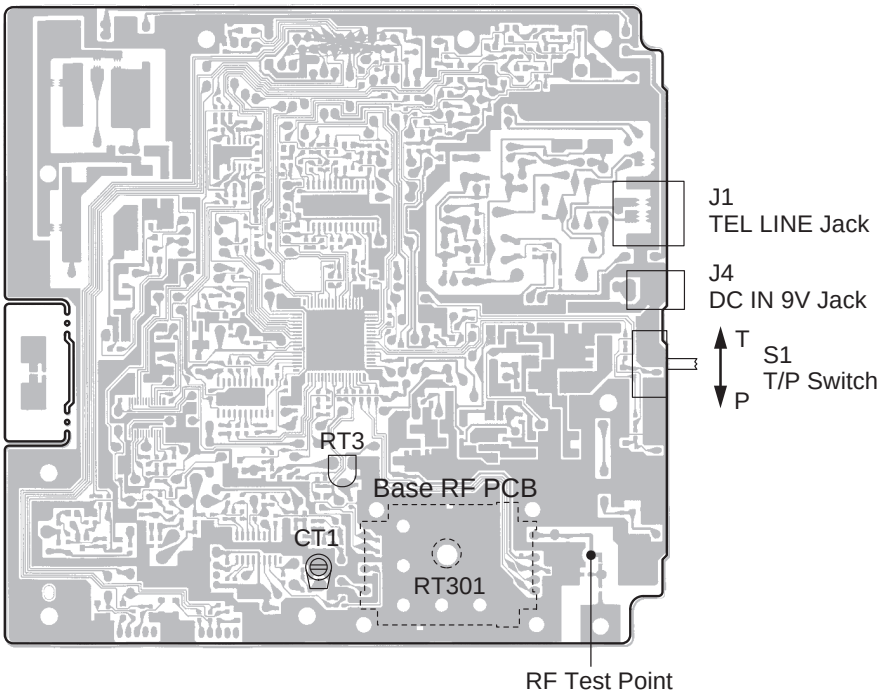
Place the Base Unit in VCO/TX FREQ.ADJ mode in accordance with the procedure on page 3.

Alignment Procedure

step	Adjustment	Remarks
1	RT301 (TX Power)	Connect the Power Meter to the RF test point on the Base MAIN PCB. Adjust RT301 for a -6.5dBm reading on the Power Meter.
2	CT1 (TX Frequency)	Connect the Frequency Counter to the RF test point on the Base MAIN PCB. Adjust CT1 to make sure that the frequency is 926.897468 MHz.
3	RT3 (TX Modulation)	Press the "PAGE" key to enter the TEST Mode 2. Connect the AF Generator to the TEL Line Jack on the Base Main PCB. Make sure that the output is 1 kHz 77.5 mV from the AF Generator. Connect the Deviation Meter to the RF test point on the Base MAIN PCB. Adjust RT3 to indicate ±8 kHz Dev.

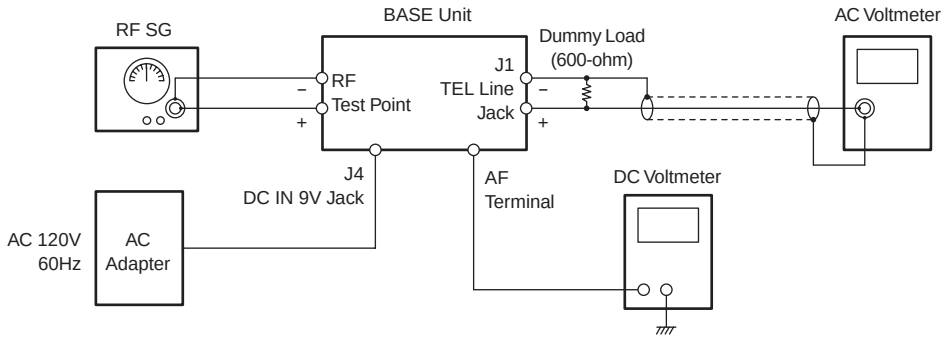
Alignment Point Location on Base Main PCB and Base RF PCB

Base Main PCB



Receiver Section

Connections



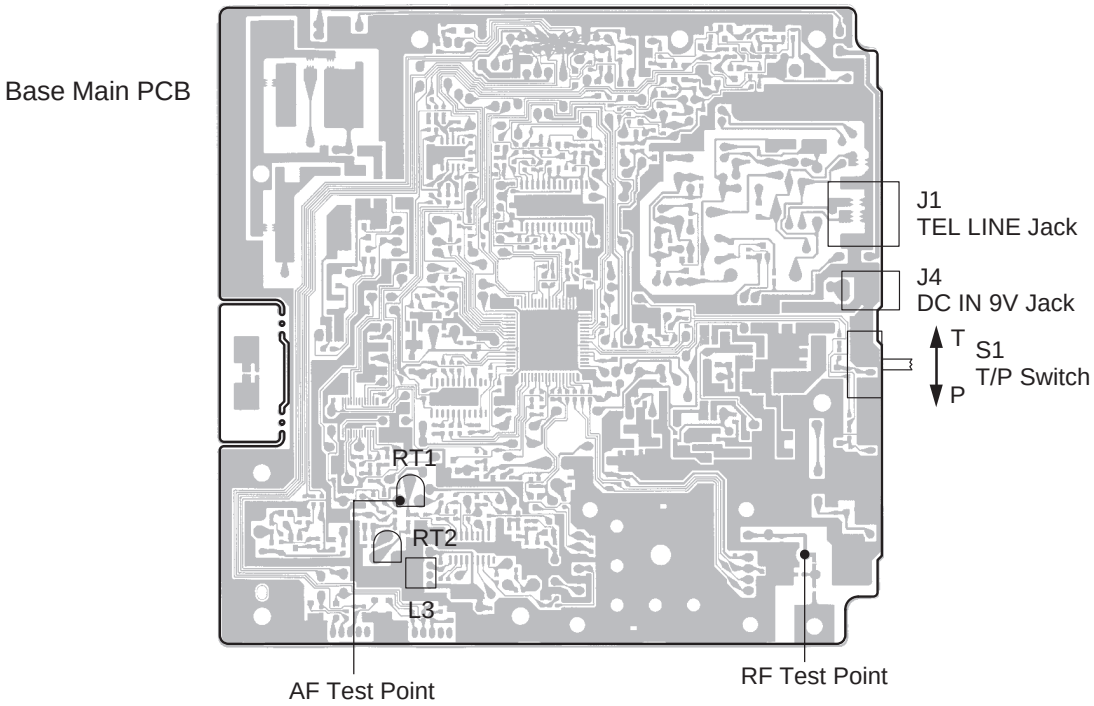
Preset

Place the Base Unit in RX SENS mode (step 4) in accordance with the precedure on page 3.

Alignment Procedure

step	Preset to	Adjustment	Remarks
1	SG: 1mV No modulation	L3 (Discriminator Voltage)	Connect the RF Signal Generator to the RF test point on the Base MAIN PCB. Make sure that the frequency is 902.952467 MHz. Connect the DC Voltmeter to the AF test point. Adjust L4 to indicate DC 1.00 V.
2	SG: 1mV 1 kHz ±8kHz deviation	RT2 (RX AF Voltage)	Connect the AC Voltmeter across a 600-ohm dummy to the Telephone Line Jack. Adjust RT2 for a 245 mV reading on the AC voltmeter.
3	SG: -6.0 dBμV No modulation	RT1 (SQ Point)	Press the “PAGE” key to enter the TEST Mode 5. Make sure that the frequency of RF SG output is 902.952467 MHz. Adjust RT1 to turn to the point where the bell rings.

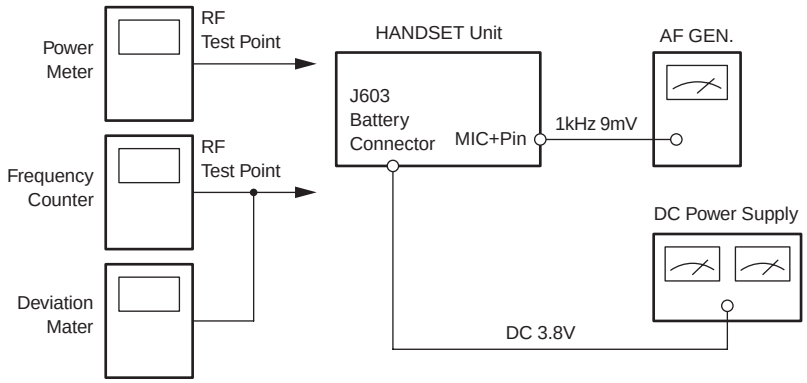
Alignment Point Location on Base Main PCB and Base RF PCB



Handset Unit

Transmitter Section

Connection



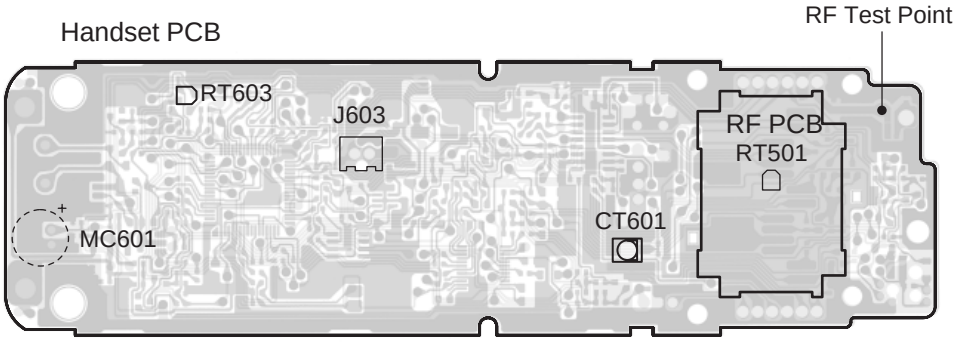
Preset

Place the Handset in VCO/TX FREQ. ADJ mode in accordance with the procedure on page 4.

Alignment Procedure

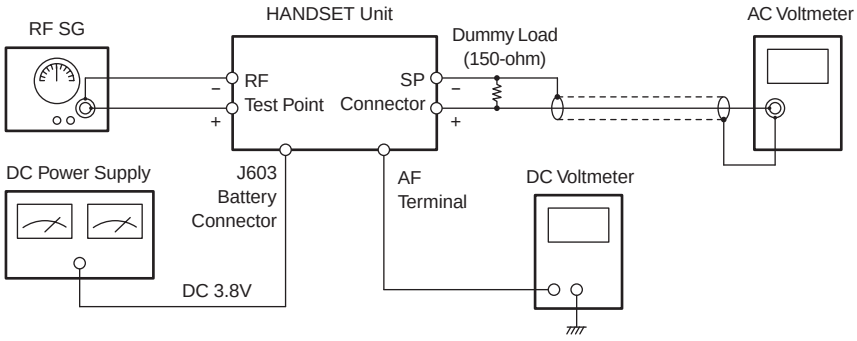
step	Adjustment	Remarks
1	RT501 (TX Power)	Connect the RF power Meter to the RF test point on the handset MAIN PCB. Adjust RT501 for a -5dBm reading on the Power Meter.
2	CT601 (TX Frequency)	Connect the Frequency Counter to the RF test point on the handset MAIN PCB. Adjust CT601 to make sure that the frequency is 903.052467 MHz.
3	RT603 (TX Modulation)	Press the “2” key to enter the TEST Mode 2. Connect the AF Generator to the MIC Connector make sure that the output is 1kHz 9mV from the AF Generator. Connect the Deviation Meter to the RF test point on the handset MAIN PCB. Adjust RT603 to indicate ±8 kHz Dev.

Alignment Point Location on Handset Main PCB and Handset RF PCB



Receiver Section

Connections



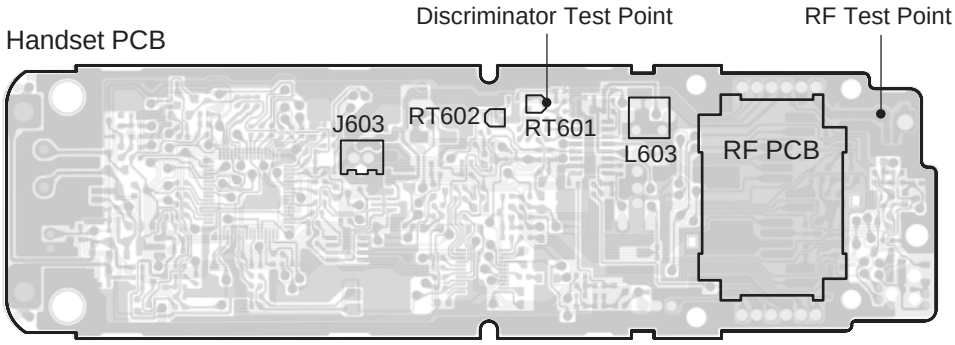
Preset

Place the Handset in RX SENS mode (step 4) in accordance with the procedure on page 4.

Alignment Procedure

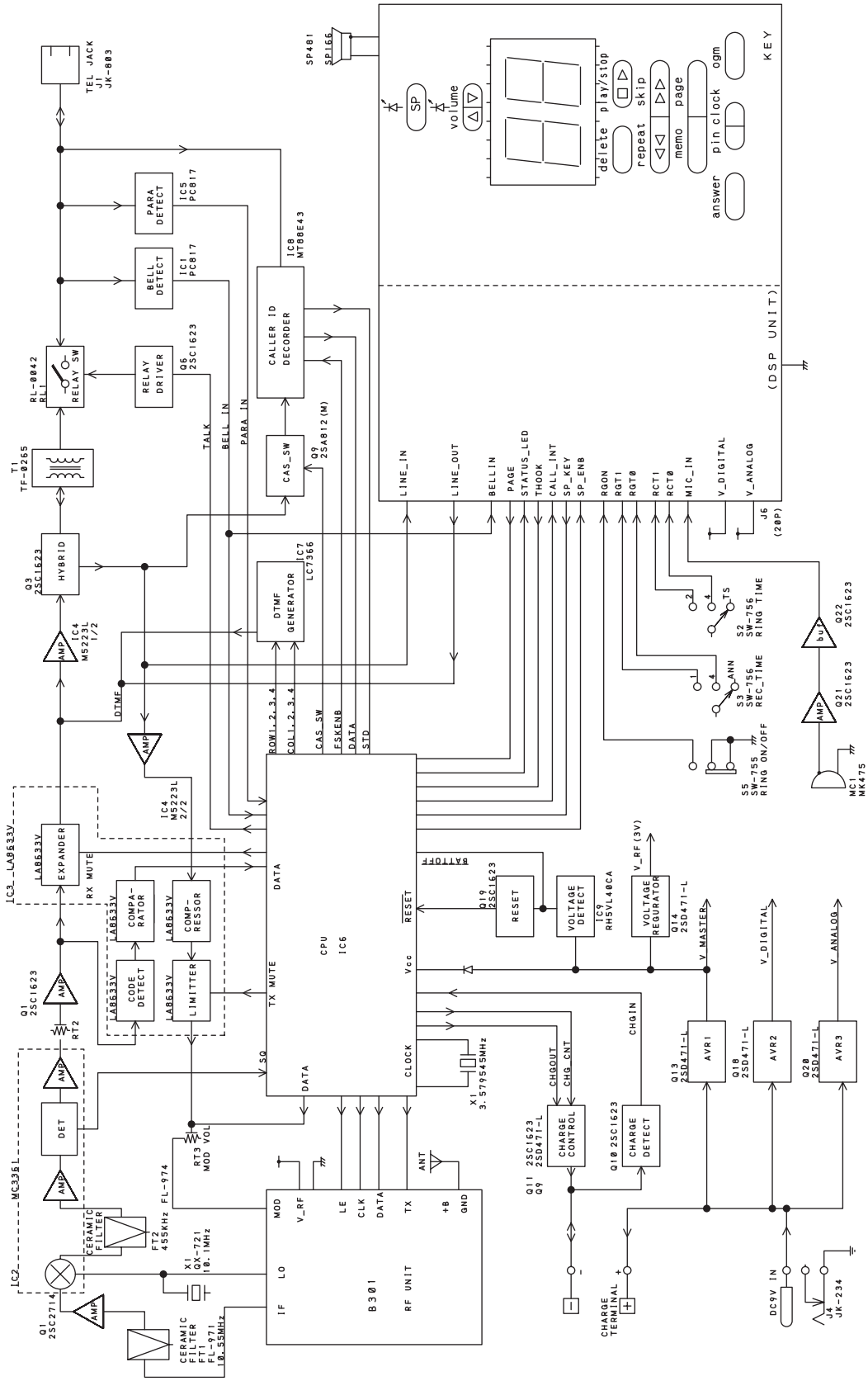
step	Preset to	Adjustment	Remarks
1	SG: 1mV No modulation	L603 (Discriminator Voltage)	Connect the RF Singal Generator to the RF test point on the handset MAIN PCB. Make sure that the frequency is 926.997467 MHz. Connect the DC Voltmeter to the Discriminator test point. Adjust L603 to indicate DC 0.85 V.
2	SG: 1mV 1 kHz ±8kHz deviation	RT602 (RX AF Voltage)	Connect the RF Signal Generator to the RF test point on the handset MAIN PCB. Make sure that the frequency is 926.997467 MHz. Connect the AC Voltmeter across a 150-ohm dummy to the MIC Connector. Adjust RT602 for a 35 mV reading on the AC Voltmeter.
3	SG: -6.0 dBμV No moduration	RT601 (SQ Point)	Press the “5” key to enter the TEST Mode 5. Make sure that the frequency of RF SG output is 926.997467 MHz. Adjust RT601 to turn to the point where the Ringer just beeps.

Alignment Point Location on Handset Main PCB and Handset RF PCB

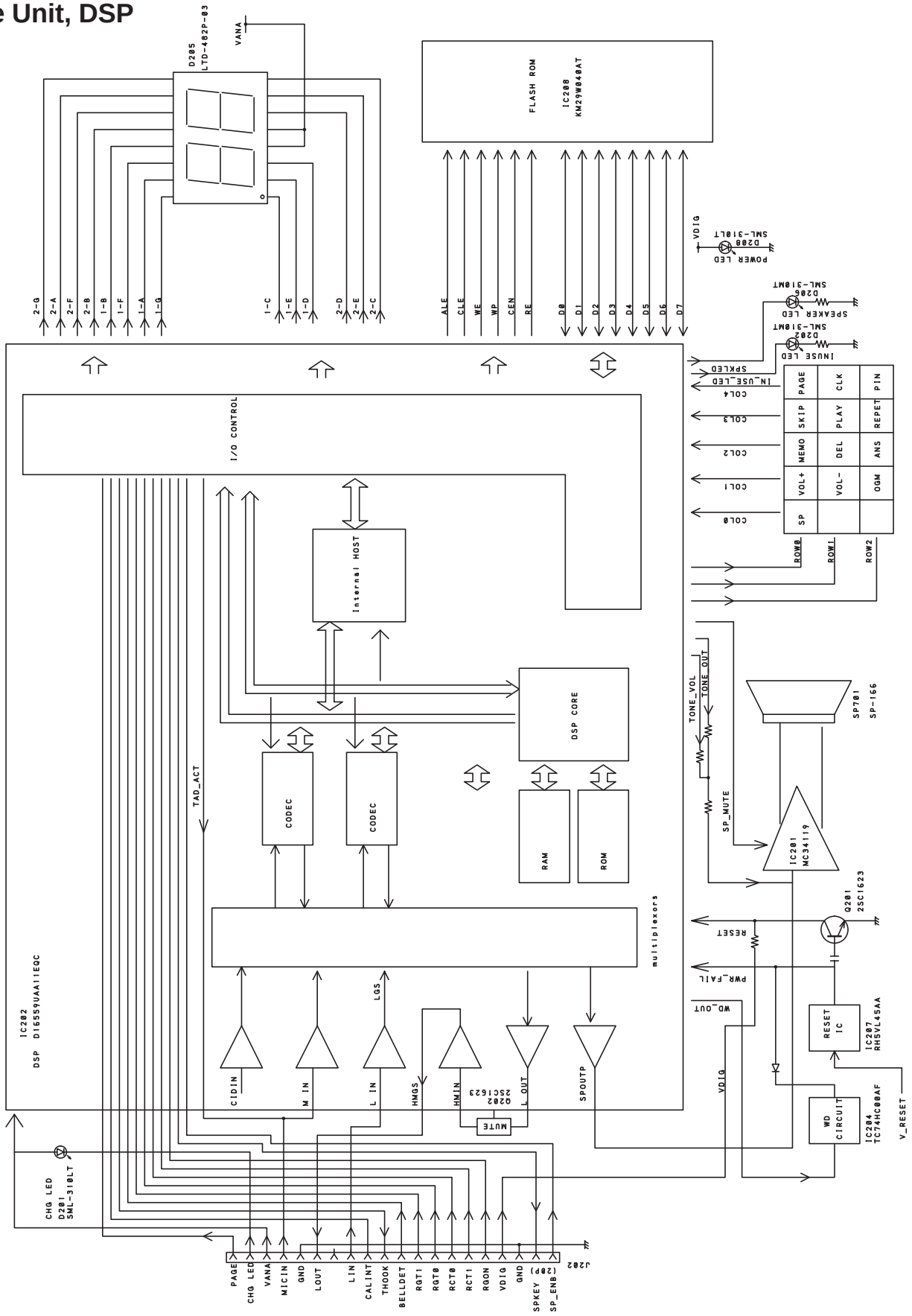


BLOCK DIAGRAMS

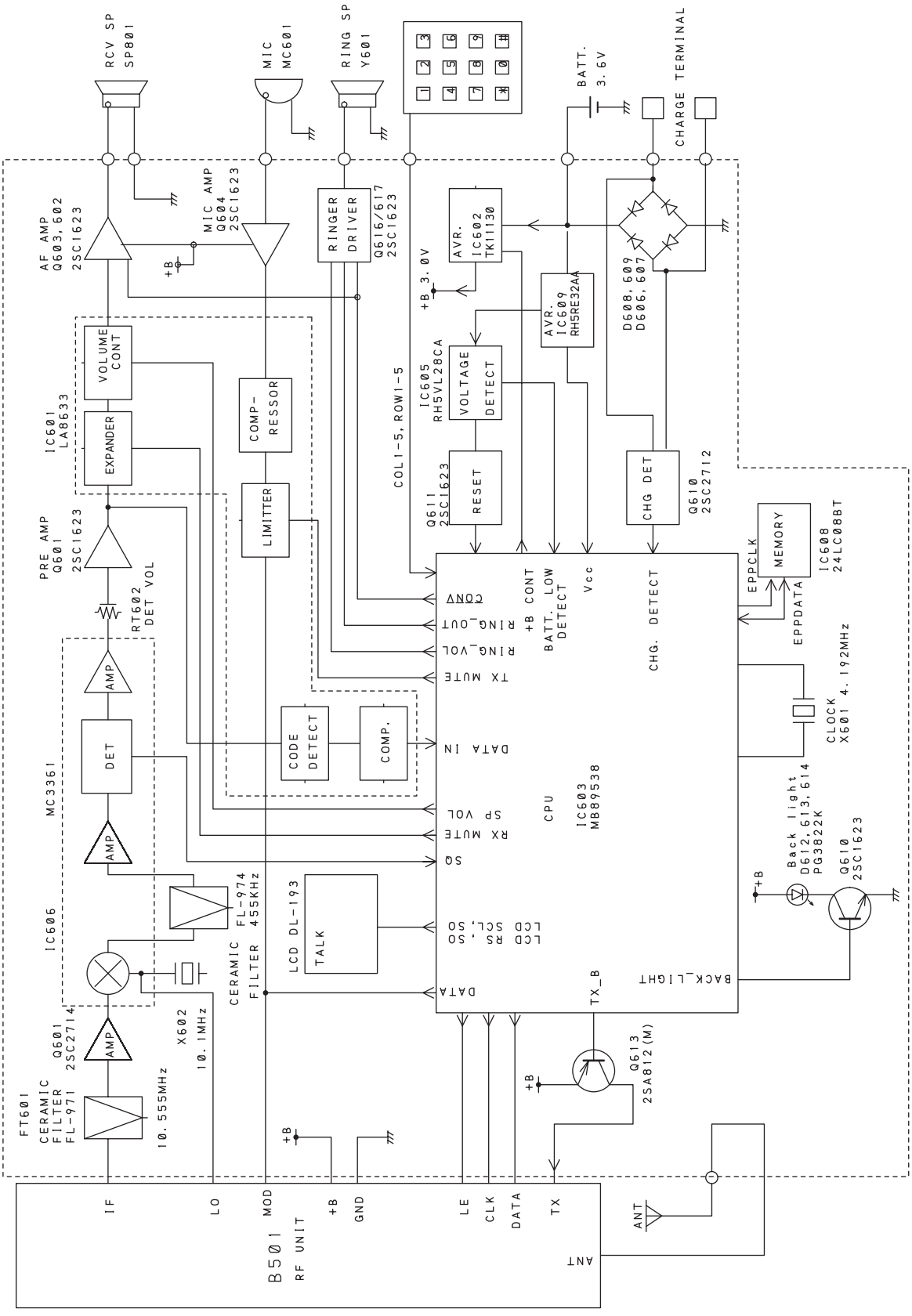
Base Unit, Main



Base Unit, DSP

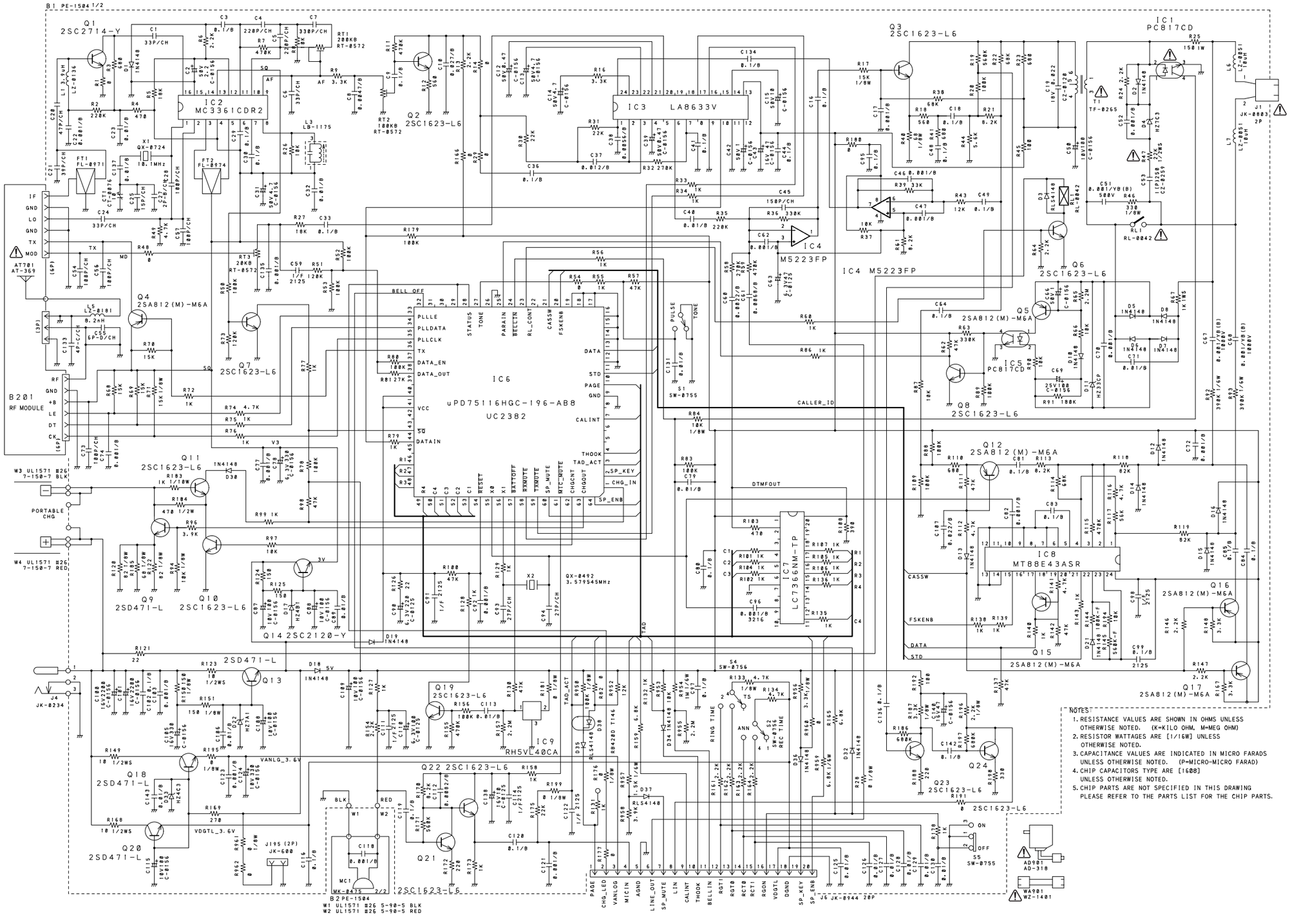


Handset

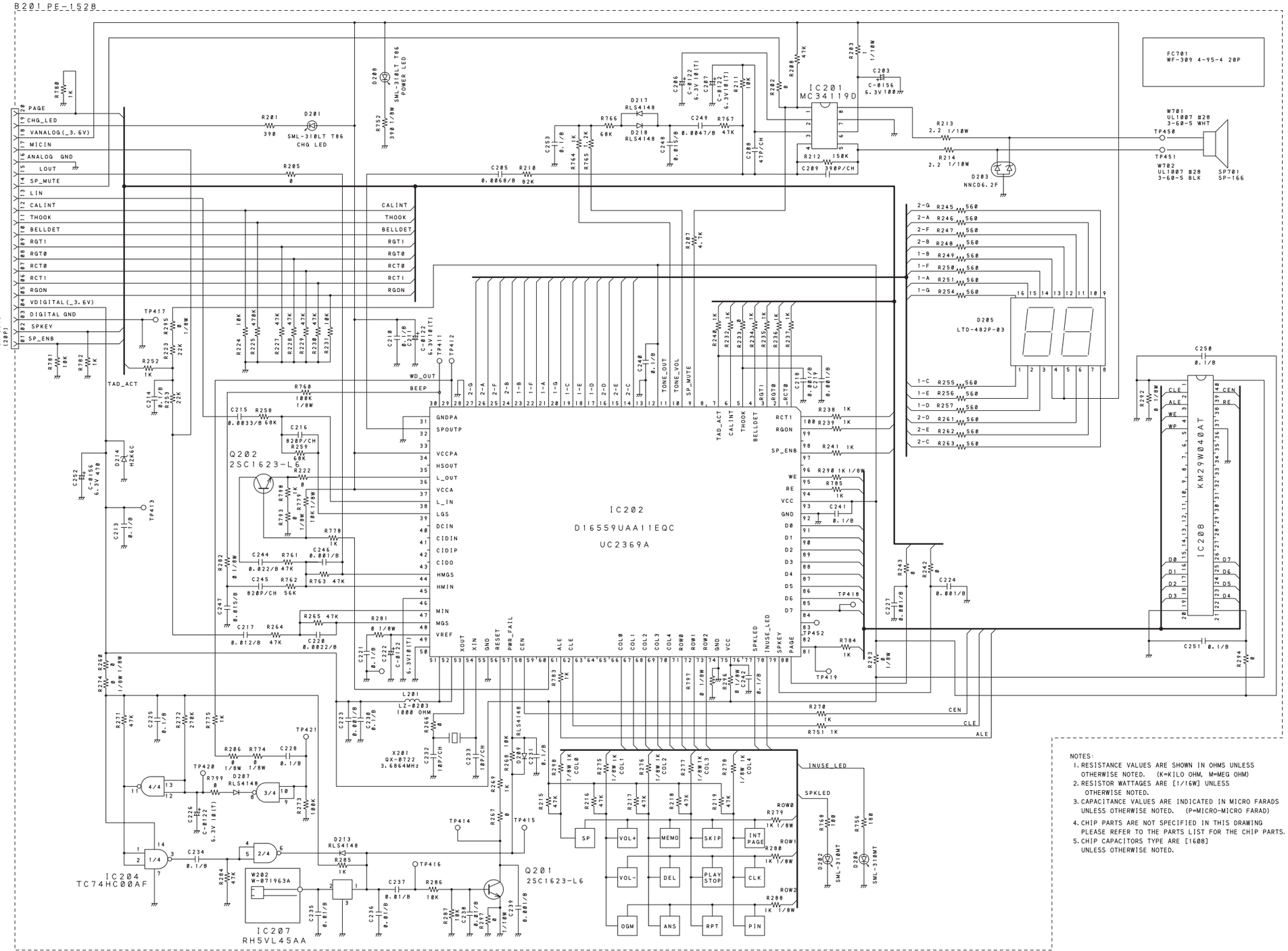

RCV SP
SP801
MIC
MC601
RING SP
Y601
BATT.
3.6V
CHARGE TERMINAL
AF AMP
Q603,602
2SC1623
MIC AMP
Q604
2SC1623
RINGER
DRIVER
Q616/617
2SC1623
AVR.
IC602
TK11130
+B 3.0V
AVR.
IC609
RH5RE32AA
D608,609
D606,607
VOLUME
CONT
IC601
LA8633
EXPANDER
COMP-
RESSOR
LIMITTER
IC605
RH5VL28CA
VOLTAGE
DETECT
RESET
Q611
2SC1623
COL1-5, ROW1-5
CHG DET
Q610
2SC2712
PRE AMP
Q601
2SC1623
RT602
DET VOL
AMP
DET
AMP
MC3361
CODE
DETECT
COMP.
CONV
RING_OUT
RING_VOL
TX MUTE
DATA IN
SP VOL
RX MUTE
SQ
LCD RS, SO
LCD SCL, SO
DATA
+B CONT
BATT. LOW
DETECT
Vcc
CHG. DETECT
BACK_LIGHT
TX_B
CPU
IC603
MB89538
EPPCLK
MEMORY
IC608
24LC08BT
EPPDATA
CLOCK
X601 4.192MHz
Back light
D612,613,614
PG3822K
Q610
2SC1623
+B
IC606
CERAMIC FILTER FL-974 455KHz
LCD DL-193
TALK
Q601
2SC2714
AMP
X602
10.1MHz
FT601
CERAMIC
FILTER
FL-971
10.555MHz
Q613
2SA812(M)
+B
B501
RF UNIT
IF
LO
MOD
+B
GND
LE
CLK
DATA
TX
ANT
ANT

SCHEMATIC DIAGRAMS

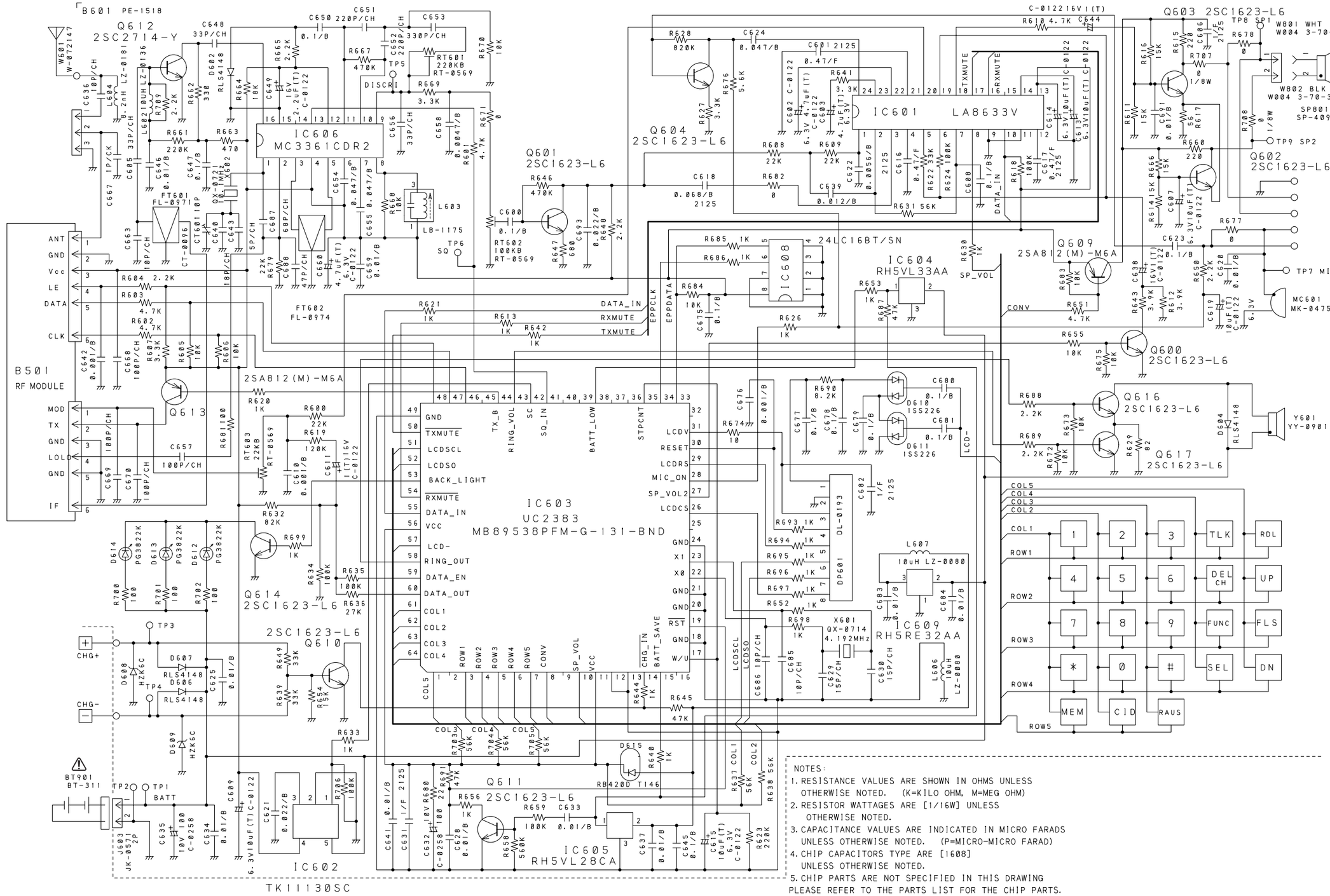
Base Unit, Main



Base Unit, Key



Handset

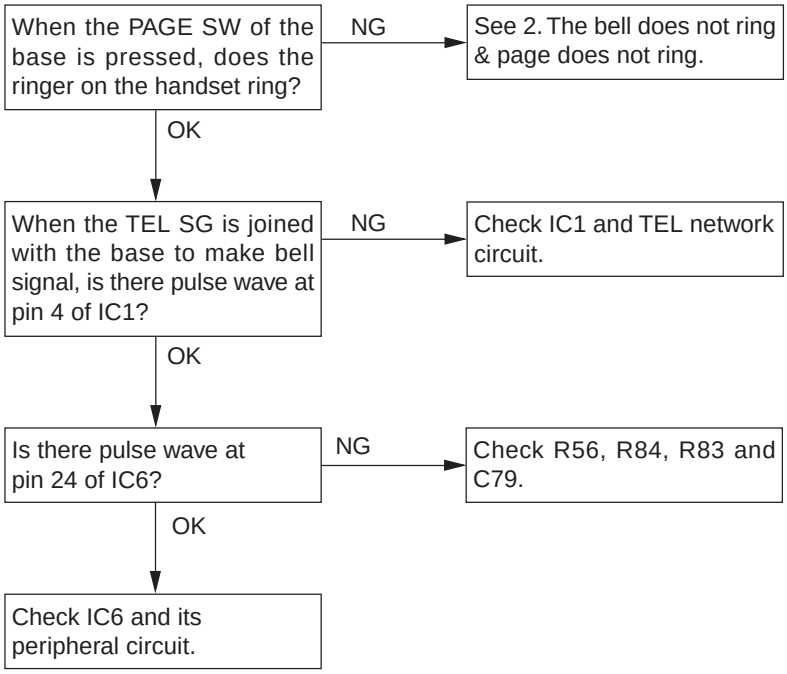


NOTES:

1. RESISTANCE VALUES ARE SHOWN IN OHMS UNLESS OTHERWISE NOTED. (K=KILO OHM, M=MEG OHM)
2. RESISTOR WATTAGES ARE [1/16W] UNLESS OTHERWISE NOTED.
3. CAPACITANCE VALUES ARE INDICATED IN MICRO FARADS UNLESS OTHERWISE NOTED. (P=MICRO-MICRO FARAD)
4. CHIP CAPACITORS TYPE ARE [1608] UNLESS OTHERWISE NOTED.
5. CHIP PARTS ARE NOT SPECIFIED IN THIS DRAWING PLEASE REFER TO THE PARTS LIST FOR THE CHIP PARTS.

TROUBLESHOOTING HINTS

1. The bell does not ring.


When the PAGE SW of the base is pressed, does the ringer on the handset ring?
NG
See 2. The bell does not ring & page does not ring.
OK
When the TEL SG is joined with the base to make bell signal, is there pulse wave at pin 4 of IC1?
NG
Check IC1 and TEL network circuit.
OK
Is there pulse wave at pin 24 of IC6?
NG
Check R56, R84, R83 and C79.
OK
Check IC6 and its peripheral circuit.

BASE UNIT

If you want to reset the unit to the factory settings

You can cancel the OGM, PIN, and the clock settings by the following process.

1) Disconnect the AC adaptor and telephone line cord from the base. Keep the AC adaptor connected to the wall outlet. Make sure that the telephone line cord remains disconnected during this procedure.
2) While pressing the DELETE button, plug the AC power adaptor into the base. Keep pressing the DELETE button for more than 4 seconds.
   A beep sounds and " P" blinks in the LED display.

To resume using the unit, connect the telephone line cord and place the handset on the base.

Note:

If you turn on the unit again, " P" may flash.

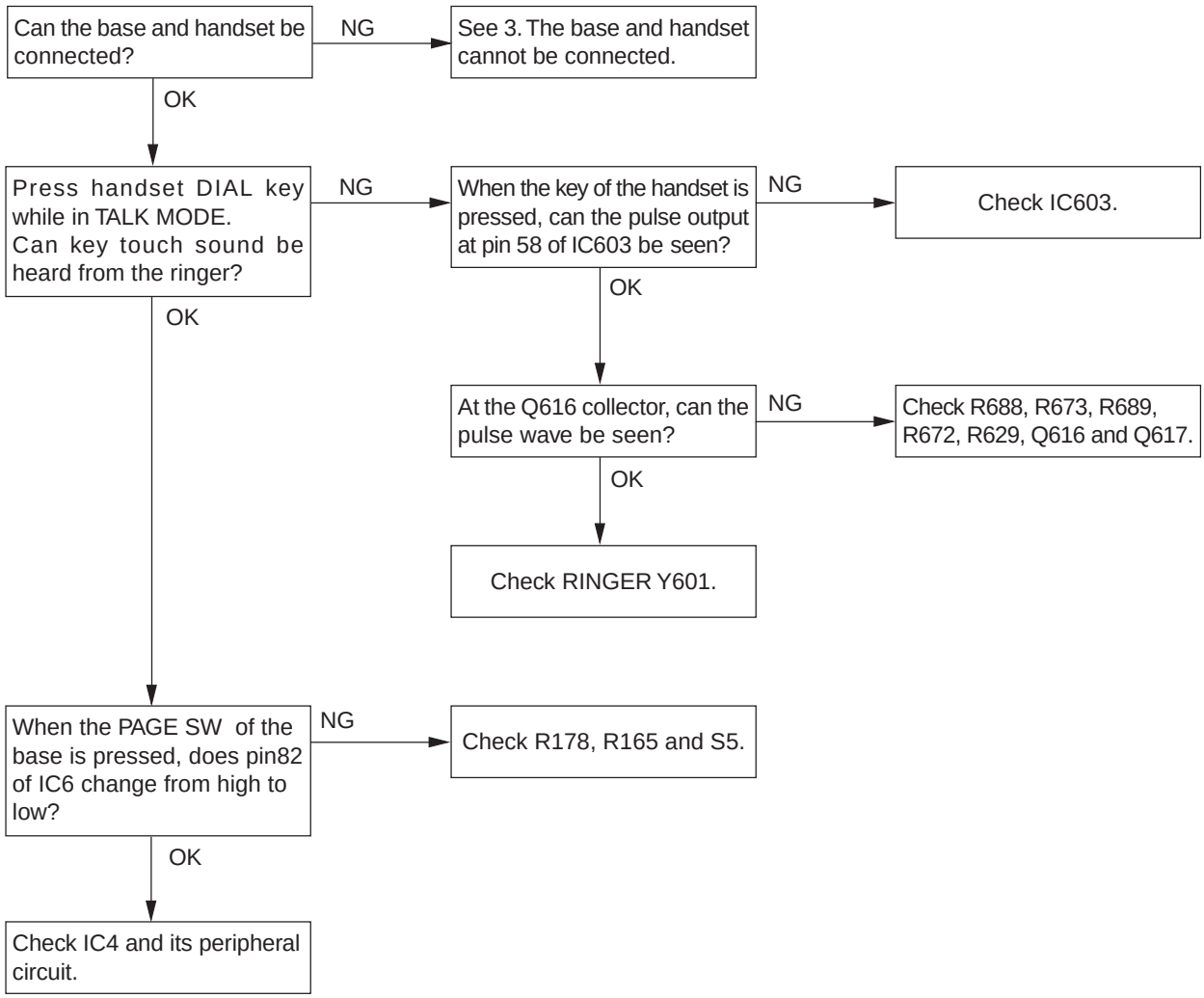
HANDSET

Delection of the Caller ID memory

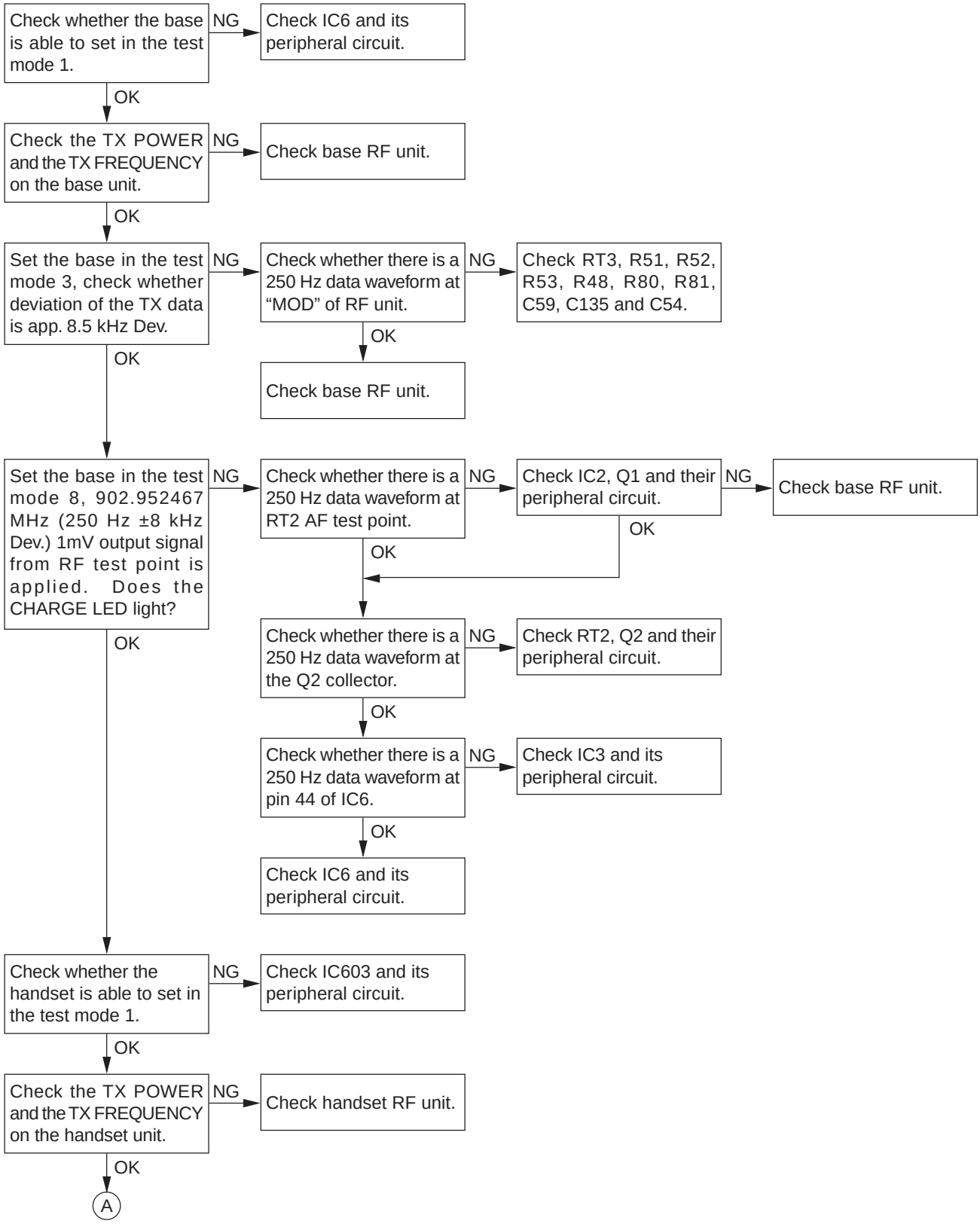
To delete the Caller ID memory in the EEPROM, proceed with the following process:

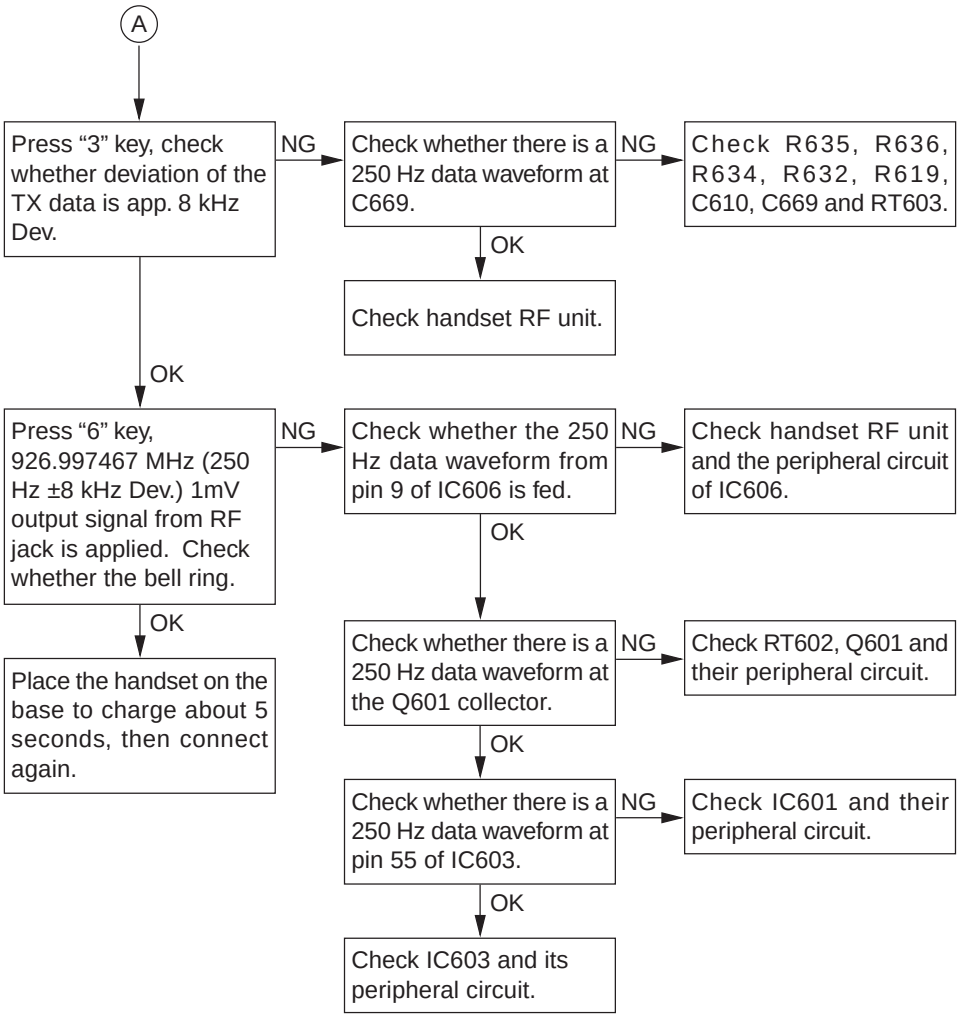
1) Connect the battery with pressing (*) and (#) buttons, and keep pressing the buttons continuously for approximate 2 seconds.
2) Release buttons when entering TEST mode with beep.
3) Press (CID) button.
4) A confirmation beep will sound after about 8 seconds, then the data for caller ID is deleted.
   (Note: Do not disconnect the battery until you hear the confirmation beep, otherwise the data may not be completely deleted.)

2. The bell does not ring & page does not ring.

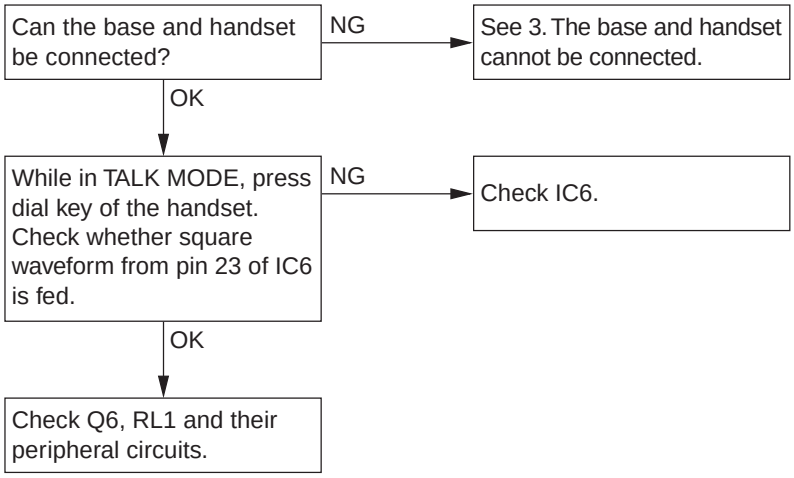

Can the base and handset be connected?
NG
See 3. The base and handset cannot be connected.
OK
Press handset DIAL key while in TALK MODE. Can key touch sound be heard from the ringer?
NG
When the key of the handset is pressed, can the pulse output at pin 58 of IC603 be seen?
NG
Check IC603.
OK
OK
At the Q616 collector, can the pulse wave be seen?
NG
Check R688, R673, R689, R672, R629, Q616 and Q617.
OK
Check RINGER Y601.
When the PAGE SW of the base is pressed, does pin82 of IC6 change from high to low?
NG
Check R178, R165 and S5.
OK
Check IC4 and its peripheral circuit.

3. The base and handset cannot be connected.

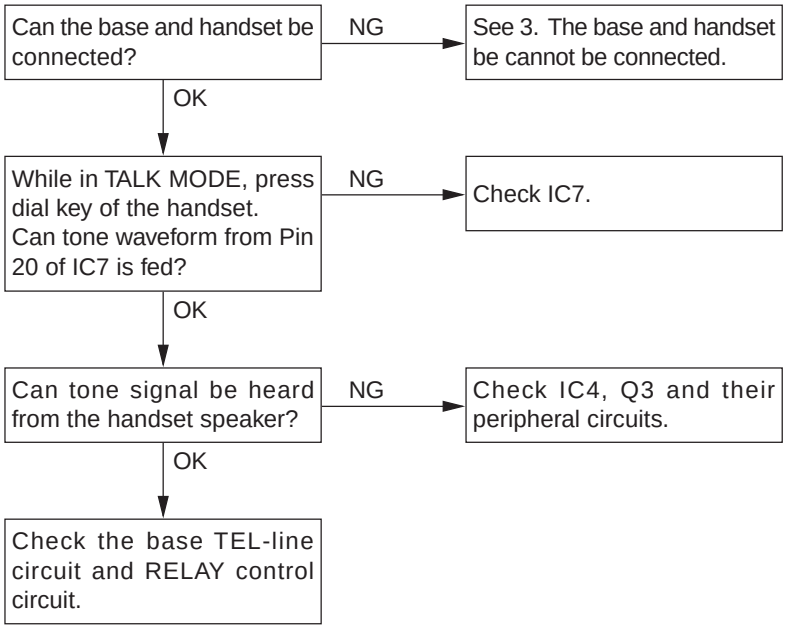

Check whether the base is able to set in the test mode 1.
NG
Check IC6 and its peripheral circuit.
OK
Check the TX POWER and the TX FREQUENCY on the base unit.
NG
Check base RF unit.
OK
Set the base in the test mode 3, check whether deviation of the TX data is app. 8.5 kHz Dev.
NG
Check whether there is a 250 Hz data waveform at "MOD" of RF unit.
NG
Check RT3, R51, R52, R53, R48, R80, R81, C59, C135 and C54.
OK
Check base RF unit.
OK
Set the base in the test mode 8, 902.952467 MHz (250 Hz ±8 kHz Dev.) 1mV output signal from RF test point is applied. Does the CHARGE LED light?
NG
Check whether there is a 250 Hz data waveform at RT2 AF test point.
NG
Check IC2, Q1 and their peripheral circuit.
NG
Check base RF unit.
OK
OK
Check whether there is a 250 Hz data waveform at the Q2 collector.
NG
Check RT2, Q2 and their peripheral circuit.
OK
Check whether there is a 250 Hz data waveform at pin 44 of IC6.
NG
Check IC3 and its peripheral circuit.
OK
Check IC6 and its peripheral circuit.
OK
Check whether the handset is able to set in the test mode 1.
NG
Check IC603 and its peripheral circuit.
OK
Check the TX POWER and the TX FREQUENCY on the handset unit.
NG
Check handset RF unit.
OK
A


A
Press “3” key, check whether deviation of the TX data is app. 8 kHz Dev.
NG
Check whether there is a 250 Hz data waveform at C669.
NG
Check R635, R636, R634, R632, R619, C610, C669 and RT603.
OK
Check handset RF unit.
OK
Press “6” key, 926.997467 MHz (250 Hz ±8 kHz Dev.) 1mV output signal from RF jack is applied. Check whether the bell ring.
NG
Check whether the 250 Hz data waveform from pin 9 of IC606 is fed.
NG
Check handset RF unit and the peripheral circuit of IC606.
OK
OK
Place the handset on the base to charge about 5 seconds, then connect again.
Check whether there is a 250 Hz data waveform at the Q601 collector.
NG
Check RT602, Q601 and their peripheral circuit.
OK
Check whether there is a 250 Hz data waveform at pin 55 of IC603.
NG
Check IC601 and their peripheral circuit.
OK
Check IC603 and its peripheral circuit.

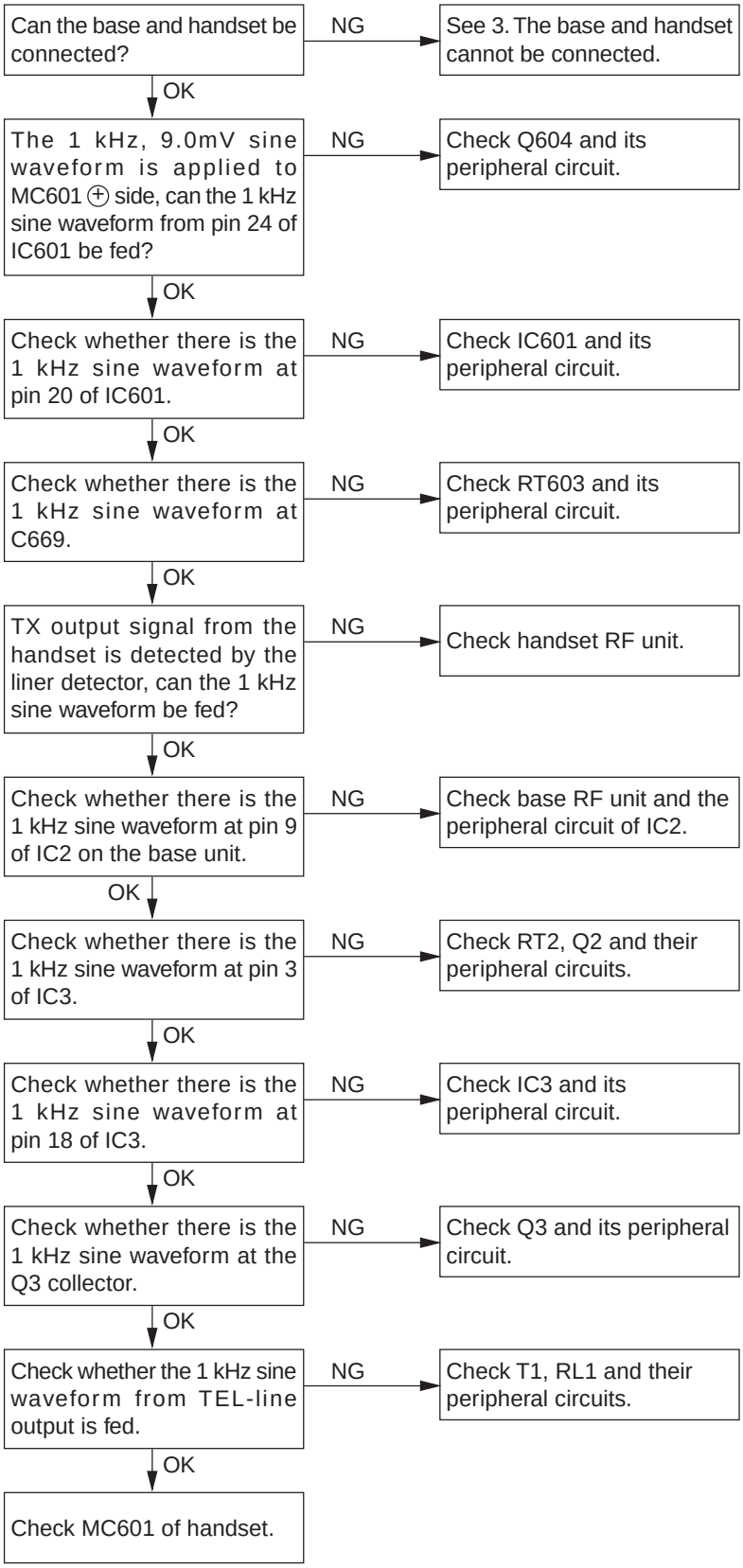
4. Cannot make a phone call (pulse).


Can the base and handset be connected?
NG
See 3. The base and handset cannot be connected.
OK
While in TALK MODE, press dial key of the handset. Check whether square waveform from pin 23 of IC6 is fed.
NG
Check IC6.
OK
Check Q6, RL1 and their peripheral circuits.

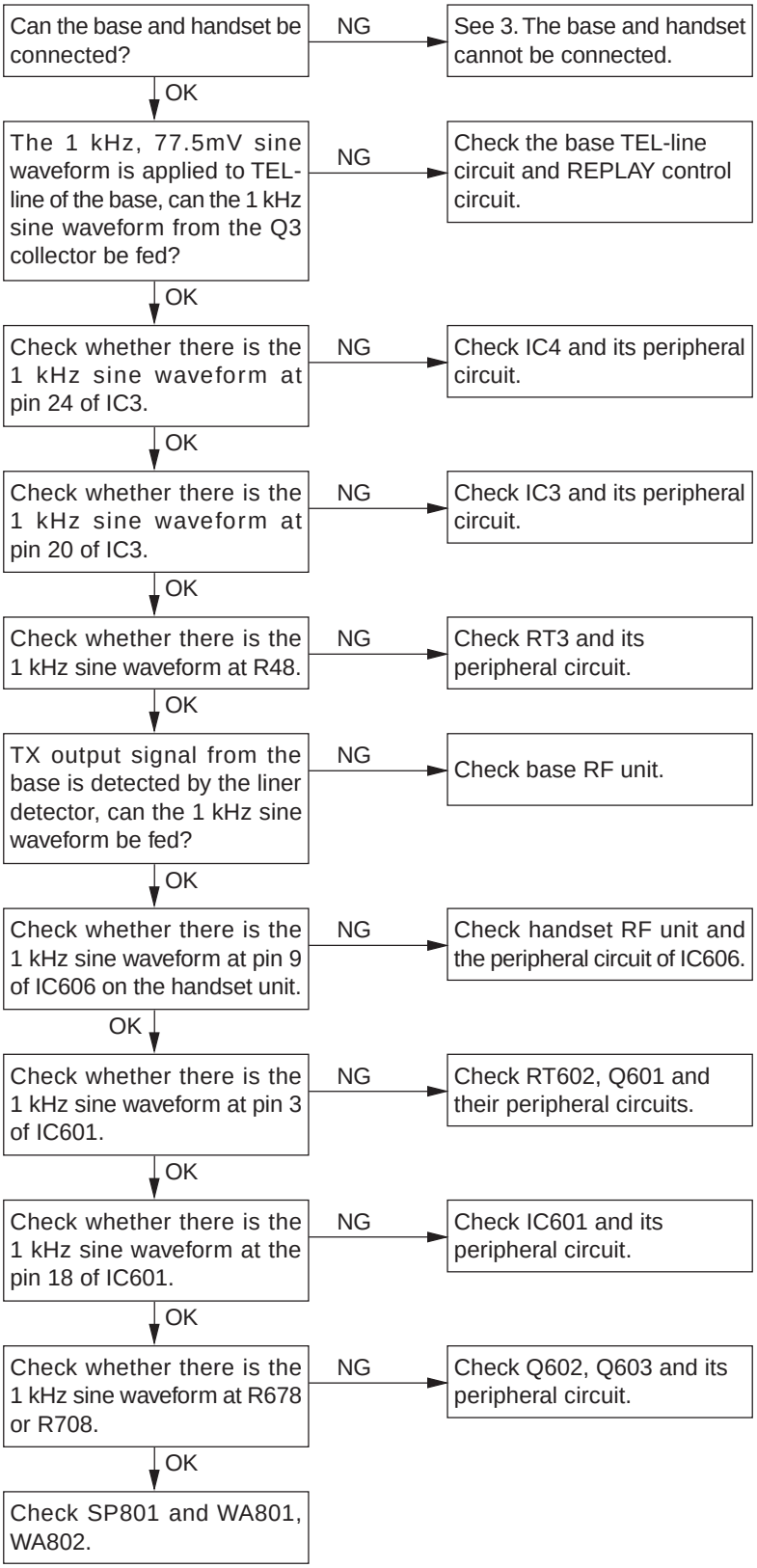
5. Cannot make a phone call (tone).


Can the base and handset be connected?
NG
See 3. The base and handset be cannot be connected.
OK
While in TALK MODE, press dial key of the handset. Can tone waveform from Pin 20 of IC7 is fed?
NG
Check IC7.
OK
Can tone signal be heard from the handset speaker?
NG
Check IC4, Q3 and their peripheral circuits.
OK
Check the base TEL-line circuit and RELAY control circuit.

6. Voice cannot be transmitted to other party (outgoing call).


Can the base and handset be connected?
NG
See 3. The base and handset cannot be connected.
OK
The 1 kHz, 9.0mV sine waveform is applied to MC601 ⊕ side, can the 1 kHz sine waveform from pin 24 of IC601 be fed?
NG
Check Q604 and its peripheral circuit.
OK
Check whether there is the 1 kHz sine waveform at pin 20 of IC601.
NG
Check IC601 and its peripheral circuit.
OK
Check whether there is the 1 kHz sine waveform at C669.
NG
Check RT603 and its peripheral circuit.
OK
TX output signal from the handset is detected by the liner detector, can the 1 kHz sine waveform be fed?
NG
Check handset RF unit.
OK
Check whether there is the 1 kHz sine waveform at pin 9 of IC2 on the base unit.
NG
Check base RF unit and the peripheral circuit of IC2.
OK
Check whether there is the 1 kHz sine waveform at pin 3 of IC3.
NG
Check RT2, Q2 and their peripheral circuits.
OK
Check whether there is the 1 kHz sine waveform at pin 18 of IC3.
NG
Check IC3 and its peripheral circuit.
OK
Check whether there is the 1 kHz sine waveform at the Q3 collector.
NG
Check Q3 and its peripheral circuit.
OK
Check whether the 1 kHz sine waveform from TEL-line output is fed.
NG
Check T1, RL1 and their peripheral circuits.
OK
Check MC601 of handset.

7. The voice of the caller cannot be heard (incoming call).


Can the base and handset be connected?
NG
See 3. The base and handset cannot be connected.
OK
The 1 kHz, 77.5mV sine waveform is applied to TEL-line of the base, can the 1 kHz sine waveform from the Q3 collector be fed?
NG
Check the base TEL-line circuit and REPLAY control circuit.
OK
Check whether there is the 1 kHz sine waveform at pin 24 of IC3.
NG
Check IC4 and its peripheral circuit.
OK
Check whether there is the 1 kHz sine waveform at pin 20 of IC3.
NG
Check IC3 and its peripheral circuit.
OK
Check whether there is the 1 kHz sine waveform at R48.
NG
Check RT3 and its peripheral circuit.
OK
TX output signal from the base is detected by the liner detector, can the 1 kHz sine waveform be fed?
NG
Check base RF unit.
OK
Check whether there is the 1 kHz sine waveform at pin 9 of IC606 on the handset unit.
NG
Check handset RF unit and the peripheral circuit of IC606.
OK
Check whether there is the 1 kHz sine waveform at pin 3 of IC601.
NG
Check RT602, Q601 and their peripheral circuits.
OK
Check whether there is the 1 kHz sine waveform at the pin 18 of IC601.
NG
Check IC601 and its peripheral circuit.
OK
Check whether there is the 1 kHz sine waveform at R678 or R708.
NG
Check Q602, Q603 and its peripheral circuit.
OK
Check SP801 and WA801, WA802.

IC AND TRANSISTOR VOLTAGE CHART

Base Unit

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC1	1	0.0	0.0	
	2	0.0	0.0	
	3	0.0	0.0	GND
	4	5.0	4.9	
IC2	1	3.2	3.1	
	2	2.8	2.8	
	3	3.1	2.8	
	4	3.3	3.3	VCC
	5	2.9	2.9	
	6	2.9	2.9	
	7	2.9	2.9	
	8	3.3	3.3	
	9	1.0	1.0	
	10	0.6	0.6	
	11	0.7	0.7	
	12	0.6	0.8	
	13	3.2	0.0	
	14	0.0	0.5	
	15	0.0	0.0	GND
	16	3.3	3.3	
IC3	1	2.9	2.9	
	2	2.9	2.9	
	3	2.7	2.7	
	4	0.7	0.6	
	5	2.7	2.7	
	6	2.7	2.7	
	7	2.8	2.8	
	8	5.1	5.1	
	9	0.0	0.0	
	10	0-5	0.5	
	11	0.0	0.0	GND
	12	2.6	2.7	
	13	5.2	5.2	VCC
	14	2.7	2.7	
	15	2.7	2.7	
	16	0.0	5.2	
	17	0.0	5.2	
	18	5.1	5.0	
	19	1.5	1.5	
	20	2.7	2.7	
	21	0.6	0.6	
	22	2.6	2.7	
	23	2.7	2.7	
	24	2.7	2.7	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC4	1	2.3	2.3	
	2	2.3	2.3	
	3	2.3	2.3	
	4	0.0	0.0	GND
	5	2.3	2.3	
	6	2.3	2.3	
	7	2.3	2.3	
	8	5.2	5.2	VCC
IC5	1	0.0	0.0	
	2	0.0	0.0	
	3	0.0	0.0	GND
	4	0.5	0.5	
IC6	1	5.2	5.1	
	2	0.6	0.6	
	3	1.3	1.3	
	4	0.6	0.6	
	5	0.0	0.0	
	6	0.0	0.0	
	7	0.0	5.2	
	8	0.0	0.0	
	9	0.0	0.0	GND
	10	0.6	0.6	
	11	0.0	0.0	
	12	0.0	0.0	
	13	0.0	0.0	
	14	0.0	0.0	
	15	0.0	0.0	
	16	0.0	0.0	
	17	0.0	0.0	
	18	0.0	0.0	
	19	0.0	0.0	
	20	0.0	0.0	
	21	5.3	0.1	
	22	0.0	0.0	
	23	0.0	4.9	
	24	5.0	5.0	
	25	0.0	0.0	
	26	0.0	0.0	
	27	5.2	5.1	
	28	2.5	2.5	
	29	2.5	2.5	
	30	0.0	0.0	
	31	0.0	0.0	
	32	0.9	0.5	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC6	33	3.2	3.3	
	34	3.3	3.3	
	35	0.0	0.0	
	36	3.3	0.1	
	37	0.0	0.0	
	38	1.1	1.1	
	39	0.0	0.0	
	40	5.3	5.2	
	41	5.3	5.2	VCC
	42	0.0	0.0	
	43	0.1	5.1	
	44	0.5	0.5	
	45	0.0	0.0	
	46	5.3	5.2	
	47	5.3	5.2	
	48	0.0	0.0	
	49	0.0	0.0	
	50	0.0	0.0	
	51	0.0	0.0	
	52	0.0	5.2	
	53	5.3	5.2	
	54	5.3	5.2	
	55	3.1	3.1	
	56	2.9	2.8	
	57	5.2	5.1	
	58	0.0	5.2	
	59	0.0	5.2	
	60	5.2	0.0	
	61	5.2	5.1	
	62	5.2	5.2	
	63	0.0	5.1	
	64	5.2	0.0	
IC7	1	3.2	5.2	VCC
	2	0.0	3.2	
	3	5.3	0.0	
	4	5.3	5.2	
	5	0.0	5.2	
	6	0.0	0.0	
	7	0.0	0.0	GND
	8	2.3	0.0	
	9	2.5	2.3	
	10	0.0	2.5	
	11	5.2	0.0	
	12	0.0	5.2	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC7	13	0.0	0.0	
	14	0.0	0.0	
	15	5.3	5.2	
	16	5.3	5.2	
	17	0.0	0.0	
	18	0.0	0.0	
	19	3.2	3.2	
	20	2.6	2.6	
IC8	1	2.6	2.6	
	2	2.6	2.6	
	3	2.6	2.6	
	4	2.6	2.6	
	5	0.0	2.6	
	6	0.0	0.0	
	7	0.0	0.0	
	8	0.0	0.0	
	9	0.0	0.0	
	10	2.6	0.6	
	11	2.7	2.6	
	12	0.0	0.0	GND
	13	0.0	0.0	
	14	0.0	0.0	
	15	0.0	0.0	
	16	5.2	5.2	
	17	5.2	5.2	
	18	5.2	5.2	
	19	0.0	5.2	
	20	0.0	0.0	
	21	0.0	0.0	
	22	0.0	0.0	
	23	0.0	0.0	
	24	5.2	5.7	VCC
IC9	1	5.2	5.2	
	2	5.2	5.2	VCC
	3	0.0	0.0	GND
IC201	1	2.6	2.6	
	2	1.4	1.4	
	3	1.4	1.4	
	4	1.4	1.4	
	5	1.4	1.4	
	6	3.6	3.6	
	7	0	0	GND
	8	1.4	1.4	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC202	1	0	0	
	2	0	0	
	3	0	0	
	4	3.1	3.1	
	5	0	0	
	6	0	3.8	
	7	0	3.8	
	8	0	0	OPEN
	9	2.6	2.6	
	10	0	0	
	11	0	0	
	12	3.6	3.6	
	13	0	0	GND
	14	2.2	2.2	
	15	2.2	2.2	
	16	2.2	2.2	
	17	2.2	2.2	
	18	2.2	2.2	
	19	2.2	2.2	
	20	2.2	2.2	
	21	2.2	2.2	
	22	2.2	2.2	
	23	2.2	2.2	
	24	2.2	2.2	
	25	2.2	2.2	
	26	2.2	2.2	
	27	2.2	2.2	
	28	0	0	GND
	29	3.6(AC)	3.6(AC)	
	30	0	0	
	31	0	0	GND
	32	1.5	1.5	
	33	1.5	1.5	OPEN
	34	3.6	3.6	
	35	1.6	1.6	OPEN
	36	1.6	1.6	
	37	3.6	3.6	
	38	1.6	1.6	
	39	1.6	1.6	
	40	0	0	OPEN
	41	0	0	OPEN
	42	0	0	OPEN
	43	3.6	3.6	OPEN
	44	1.6	1.6	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC202	45	1.6	1.6	
	46	0	0	GND
	47	1.6	1.6	
	48	1.6	1.6	
	49	1.6	1.6	
	50	0	0	GND
	51	3.6	3.6	
	52	3.6	3.6	
	53	0.4	0.4	
	54	0.6	0.6	
	55	0	0	GND
	56	3.6	3.6	
	57	3.6	3.6	
	58	3.6	3.6	
	59	3.6	3.6	
	60	2.2	0	OPEN
	61	0	0	
	62	0	0	
	63	3.6	3.6	OPEN
	64	3.6	3.6	OPEN
	65	3.6	3.6	OPEN
	66	3.6	3.6	
	67	3.6	3.6	
	68	3.6	3.6	
	69	3.6	3.6	
	70	3.6	3.6	
	71	0	0	
	72	0	0	
	73	0	0	
	74	0	0	GND
	75	3.6	3.6	
	76	0	0	OPEN
	77	0	0	
	78	0	3.2	
	79	0	0	
	80	0	0	
	81	3.6	3.6	
	82	0	0	OPEN
	83	0	0	OPEN
	84	0	0	
	85	0	0	
	86	0	0	
	87	0	0	
	88	0	0	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC202	89	0	0	
	90	0	0	
	91	0	0	
	92	0	0	GND
	93	3.6	3.6	
	94	3.6	3.6	
	95	3.6	3.6	
	96	0	0	OPEN
	97	0	0	
	98	0	0	OPEN
	99	3.0	3.0	
	100	0.0	0.0	
IC204	1	3.6	3.6	
	2	3.6	3.6	
	3	0	0	
	4	0	0	
	5	0	0	
	6	3.6	3.6	
	7	0	0	GND
	8	3.6(AC)	3.6(AC)	
	9	3.1(AC)	3.1(AC)	
	10	3.1(AC)	3.1(AC)	
	11	3.6	3.6	
	12	0.4	0.4	
	13	0.4	0.4	
	14	3.6	3.6	
IC207	1	3.6	3.6	
	2	5.0	5.0	
	3	0	0	GND
IC208	1	0	0	
	2	0	0	
	3	0	0	
	4	3.6	3.6	
	5	3.6	3.6	OPEN
	6	0	0	OPEN
	7	0	0	OPEN
	8	0	0	OPEN
	9	0	0	OPEN
	10	0	0	OPEN
	11	0	0	OPEN
	12	0	0	OPEN
	13	0	0	OPEN
	14	0	0	OPEN
	15	0	0	OPEN

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC208	16	0	0	
	17	0	0	
	18	0	0	
	19	0	0	
	20	0	0	GND
	21	3.6	3.6	
	22	0	0	
	23	0	0	
	24	0	0	
	25	0	0	
	26	0	0	OPEN
	27	0	0	OPEN
	28	0	0	OPEN
	29	0	0	OPEN
	30	0	0	OPEN
	31	0	0	OPEN
	32	0	0	OPEN
	33	0	0	OPEN
	34	0	0	OPEN
	35	0	0	OPEN
	36	0	0	GND
	37	0	0	GND
	38	3.6	3.6	
	39	3.6	3.6	
	40	3.6	3.6	
Q1	E	0.0	0.0	GND
	C	1.9	1.9	
	B	0.7	0.7	
Q2	E	0.6	0.6	
	C	2.9	2.9	
	B	1.2	1.2	
Q3	E	0.6	0.6	
	C	4.0	3.9	
	B	1.3	1.33.29	
Q4	E	3.3	3.2	
	C	0.0	0.0	
	B	3.3	0.0	
Q5	E	0.0	0.0	
	C	0.0	0.0	
	B	0.0	0.0	
Q6	E	0.0	0.0	GND
	C	10.8	0.0	
	B	0.0	0.0	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
Q7	E	0.0	0.0	GND
	C	0.0	5.1	
	B	0.6	0.0	
Q8	E	0.0	0.0	GND
	C	0.0	0.0	
	B	0.5	0.5	
Q9	E	0.0	0.0	
	C	0.0	0.7	
	B	0.7	0.0	
Q10	E	0.0	0.0	GND
	C	0.0	0.0	
	B	0.7	0.7	
Q11	E	0.0	0.0	
	C	5.0	4.9	
	B	0.0	0.0	
Q12	E	2.6	1.2	
	C	0.0	1.2	
	B	2.6	0.6	
Q13	E	5.9	5.9	
	C	10.0	8.9	
	B	6.6	6.6	
Q14	E	3.3	3.3	
	C	6.0	5.9	
	B	4.0	4.0	
Q15	E	5.2	5.2	
	C	0.0	0.0	
	B	5.2	5.2	
Q16	E	5.2	5.2	
	C	0.0	5.2	
	B	5.3	4.5	
Q17	E	5.2	5.2	
	C	0.0	5.2	
	B	5.3	4.5	
Q18	E	3.7	3.7	
	C	10.7	9.9	
	B	4.3	4.3	
Q19	E	0.0	0.0	GND
	C	5.27	5.22	
	B	0	0	
Q20	E	0.07	3.7	
	C	1.36	9.76	
	B	0.7	4.3	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
Q21	E	0.07	0.07	
	C	1.4	1.4	
	B	0.7	0.7	
Q22	E	0.8	0.7	
	C	4.11	4.06	
	B	1.36	1.35	
Q23	E	0.17	0.17	
	C	2.49	2.48	
	B	0.77	0.77	
Q24	E	0.3	0.3	
	C	3.01	3	
	B	0.91	0.91	
Q201	E	0	0	GND
	C	3.7	3.6	
	B	0	0	
Q202	E	1.6	1.6	
	C	1.6	1.6	
	B	2.2	2.2	

Handset

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC601	1	0-2.8	1.9	
	2	0-2.8	1.9	
	3	-0.2-2.6	1.6	
	4	0.4-0.8	0.6	
	5	0.4-1.5	1.5	
	6	0.4-1.5	1.5	
	7	0-2.0	1.9	
	8	0-3.0	0	
	9	0	0	GND
	10	0-3.0	0-3.0	PULSE
	11	0	0	GND
	12	0-1.5	1.5	
	13	0-3.0	3.0	
	14	0-1.5	1.5	
	15	0-1.5	1.5	
	16	0	3.0	$\overline{\text{RXMUTE}}$
	17	0	3.0	$\overline{\text{TXMUTE}}$
	18	0-1.5	1.5	
	19	0-15.	1.5	
	20	0-1.5	1.5	
	21	1.0-4.0	0.7	
	22	1.6	1.5	
	23	1.6	1.5	
	24	1.6	1.5	
IC602	1	0-2.9	2.9	
	2	0	0	GND
	3	0-1.2	1.2	
	4	0-3.0	3.0	
	5	3.8	3.8	
IC603	1	3.0	3.0	
	2	0	0	
	3	0	0	
	4	0	0	
	5	0	0	
	6	0	0	
	7	0	0	
	8	3.0	0	CONV
	9	0	0	
	10	0-3.0	0/3	SP-VOL
	11	3.0	3.0	VCC
	12	0	0	
	13	0	0	GND
	14	3.2	3.2	BATSAVE
	15	3.2	3.2	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC603	16	0	0	
	17	1.4-3.0	3.0	W/U
	18	0	0	GND
	19	3.0	3.0	$\overline{\text{RST}}$
	20	0	0	GND
	21	0	0	GND
	22	0.3-1.9	0.3-1.9	SINE WAVE
	23	0-3.0	0-3.0	SINE WAVE
	24	0	0	GND
	25	0	0	
	26	0	2.9	LCD-
	27	0	2.9/0	SP-VOL2
	28	0	2.9	MIC-ON
	29	0	2.9	LCDRS
	30	0	2.9	RESET
	31	0	2.9	LCDV
	32	0	0	
	33	2.9	2.9	
	34	0	0	
	35	2.9	2.9	
	36	0	0	
	37	0	0	
	38	3.2	3.2	BATLOW
	39	0	0	
	40	0	0	
	41	0-2.9	0	SQ-IN
	42	0-2.9	2.9	SC
	43	0	0/2.9	RINGVOL
	44	0-2.5	0	$\overline{\text{TXB}}$
	45	0	0	
	46	0-2.9	0	
	47	0-2.9	0	
	48	0-2.9	2.9	
	49	0	0	GND
	50	0	2.9	TXMUTE
	51	2.9	2.9	LCDSCL
	52	0	0-2.9	PULSE
	53	0	0	
	54	0	2.9	
	55	0-2.9	0-2.9	PULSE
	56	3.0	3.0	
	57	0	0-2.9	PULSE
	58	0	0	
	59	0	0	

Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
IC603	60	0	0	
	61	3.0	3.0	
	62	3.0	3.0	
	63	3.0	3.0	
	64	3.0	3.0	
IC604	1	3.2	3.2	
	2	3.8	3.8	
	3	0	0	
IC605	1	3.2	3.2	
	2	3.2	3.2	
	3	0	0	
IC606	1	0-3.7	2.3-3.7	SINE WAVE
	2	0-2.9	2.2-2.9	SINE WAVE
	3	0-2.5	2.2-2.8	
	4	3.0	3.0	
	5	0-2.5	2.3-2.8	
	6	0-2.5	2.5	
	7	0-2.5	2.5	
	8	0-3.0	2.8	
	9	0-1.5	0.5-1.0	SINE WAVE
	10	0-0.7	0.6	
	11	0-0.7	0.6	
	12	0-0.7	0.8	
	13	0	0	
	14	0	0	
	15	0	0	
	16	0-3.0	2.6-3.2	SINE WAVE
IC608	1	0	0	
	2	0	0	
	3	0	0	
	4	0	0	
	5	0-3.0	3.0	
	6	0	0	
	7	0	0	
	8	0-3.0	3.0	
IC609	1	0	0	
	2	3.8	3.8	
	3	3.2	3.2	
Q600	E	0	0	
	C	0	0	
	B	0	0.7	
Q601	E	0-0.4	1.0	
	C	0-2.0	1.9	
	B	0-1.0	0.3	

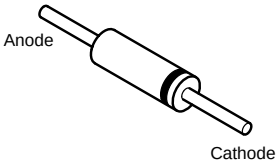
Unit[V]

Ref. No.	PIN	STBY	TALK	NOTE
Q602	E	0	0.7	
	C	0-0.2	1.5	
	B	0	1.3	
Q603	E	0	0.6	
	C	0	1.6	
	B	0	1.3	
Q604	E	0	0.5	
	C	0	1.6	
	B	0	1.0	
Q609	E	0-0.3	0	
	C	0	3	
	B	0-3.0	2.3	
Q610	E	0	3.2	
	C	3.2	0	
	B	0	0	
Q611	E	0	0	
	C	3.2	2.9	
	B	0	0	
Q612	E	0	0	
	C	0-2.2	1.5-2.5	SINE WAVE
	B	0-0.7	0.7	
Q613	E	0-3.0	3.0	
	C	0.3	3.0	
	B	0-2.5	2.2	
Q614	E	0	0	
	C	2.3	2.3	
	B	0	0	
Q616	E	0	0	
	C	3.8	3.8	
	B	0	0	
Q617	E	0	0	
	C	0	0	
	B	0	0	

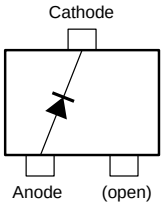
SEMICONDUCTOR LEAD IDENTIFICATION

Base Unit

D1/D2/D5/D6/D7/D8/D10
/D12/D13/D14/D15/D16/D18
/D19/D21/D30/D32/D34/D36: 1N4148
D4 : HZ7C3
D11 : HZ33CP
D17 : HZ4B1
D22 : HZ7A1
D33 : HZ4C3

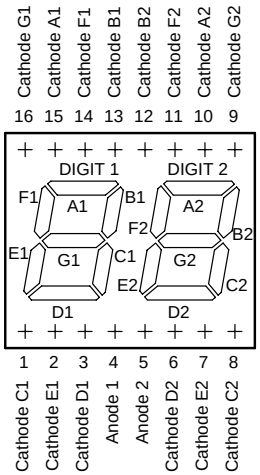


D38 : RB420D

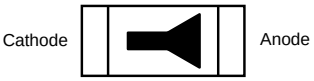


D3/D35/D37/D207/D209
/D213/D217/D218 : RLS4148
D20/D214 : HZK6C

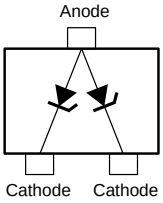
D205 :LTD-482P



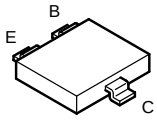
D201/D208 : SML-310LT
D202/D206 : SML-310MT



D203 : NNCD6.2F

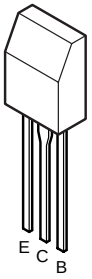


Q1 : 2SC2714
Q2/Q3/Q6/Q7/Q8/Q10
/Q11/Q19/Q21/Q22/Q23
/Q24/Q201/Q202 : 2SC1623
Q4/Q5/Q12/Q15/Q16/Q17 : 2SA812(M)

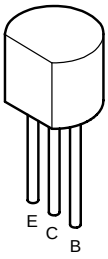


B : Base
E : Emitter
C : Collector

Q9/Q13/Q18/Q20 : 2SD471

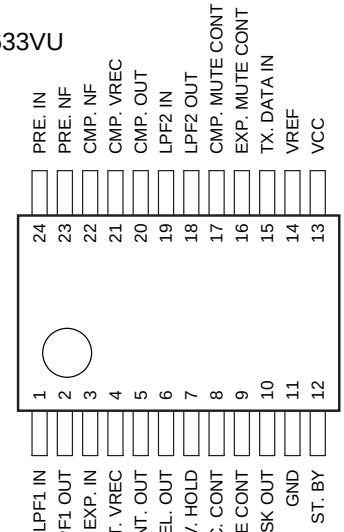


Q14 : 2SC2120

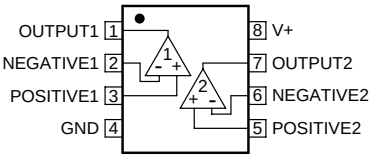


IC1/IC5
PC817CD

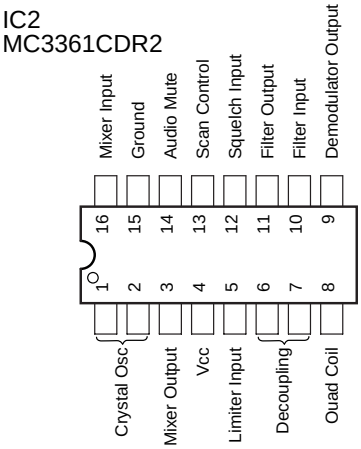
IC3
LA8633VU



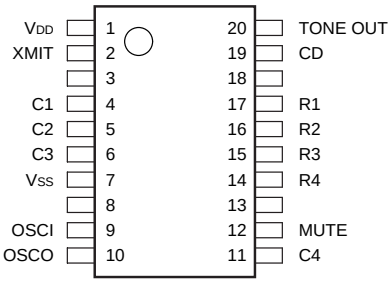
IC4 :M5223FP



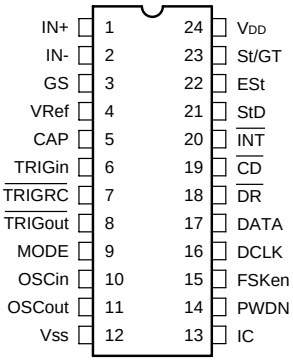
IC2
MC3361CDR2



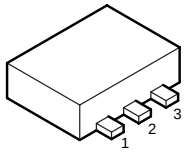
IC7
LC7366NM



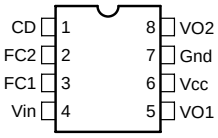
IC8
MT88E43



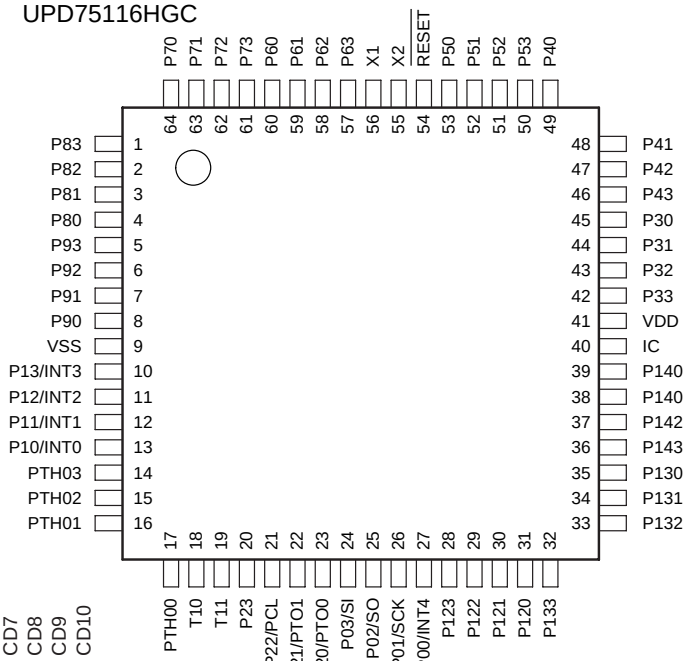
IC9 : RH5VL40CA
IC207 : RH5VL45AA



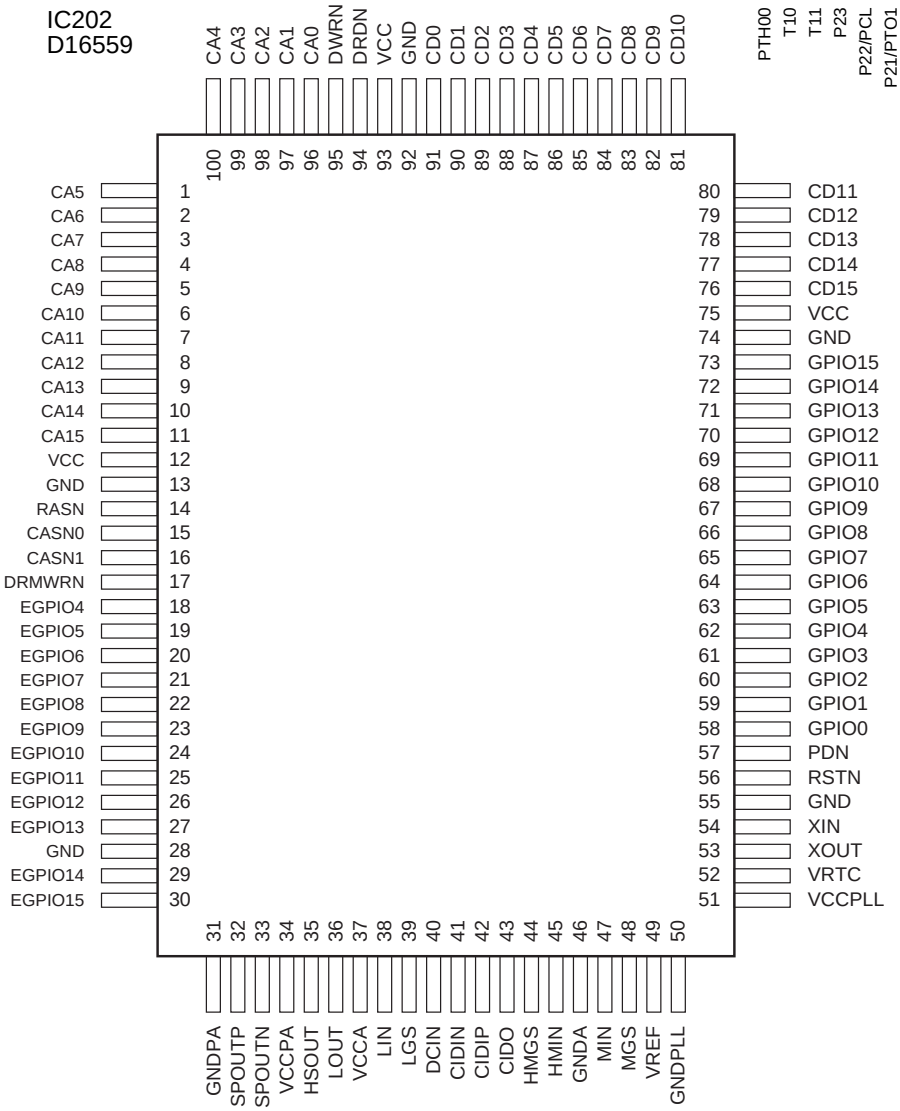
IC201
MC34119D



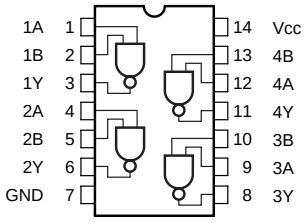
IC6
UPD75116HGC



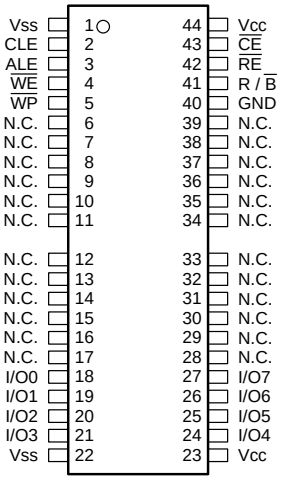
IC202
D16559



IC204
TC74HC00AF



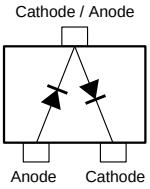
IC208
KM29W040AT



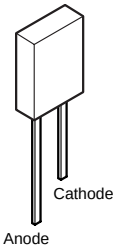
Handset

D602 / D604
/ D606 / D607 : RLS4148
D608 / D609 : HZK6C

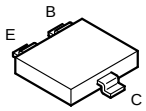
D610 / D611 : 1SS226



D612 / D613 / D614 : PG3822K

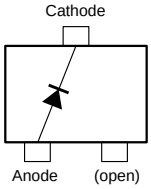


Q600 / Q601 / Q602 / Q603 / Q604
/ Q610 / Q611 / Q614 / Q616 / Q617 : 2SC1623
Q609 / Q613 : 2SA812(M)
Q612 : 2SC2714

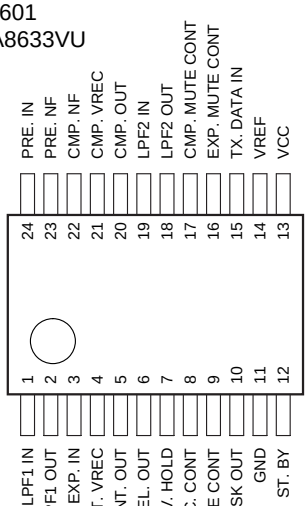


B : Base
E : Emitter
C : Collector

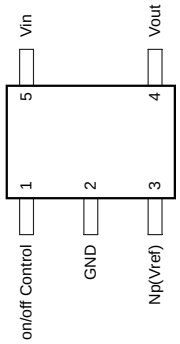
D615 : RB420D



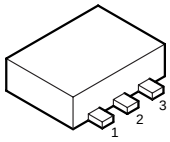
IC601
LA8633VU



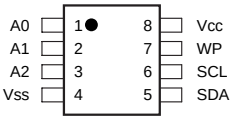
IC602
TK11130SCL



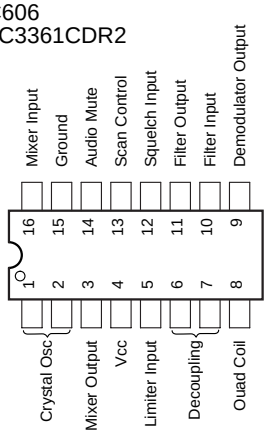
IC604 : RH5VL33AA
IC605 : RH5VL28CA
IC609 : RH5RE32AA



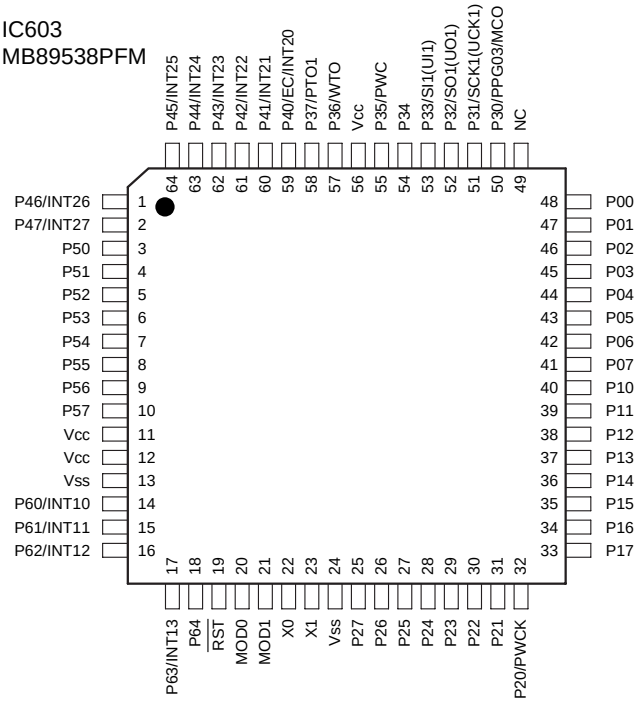
IC608
24LC16BT/SN



IC606
MC3361CDR2



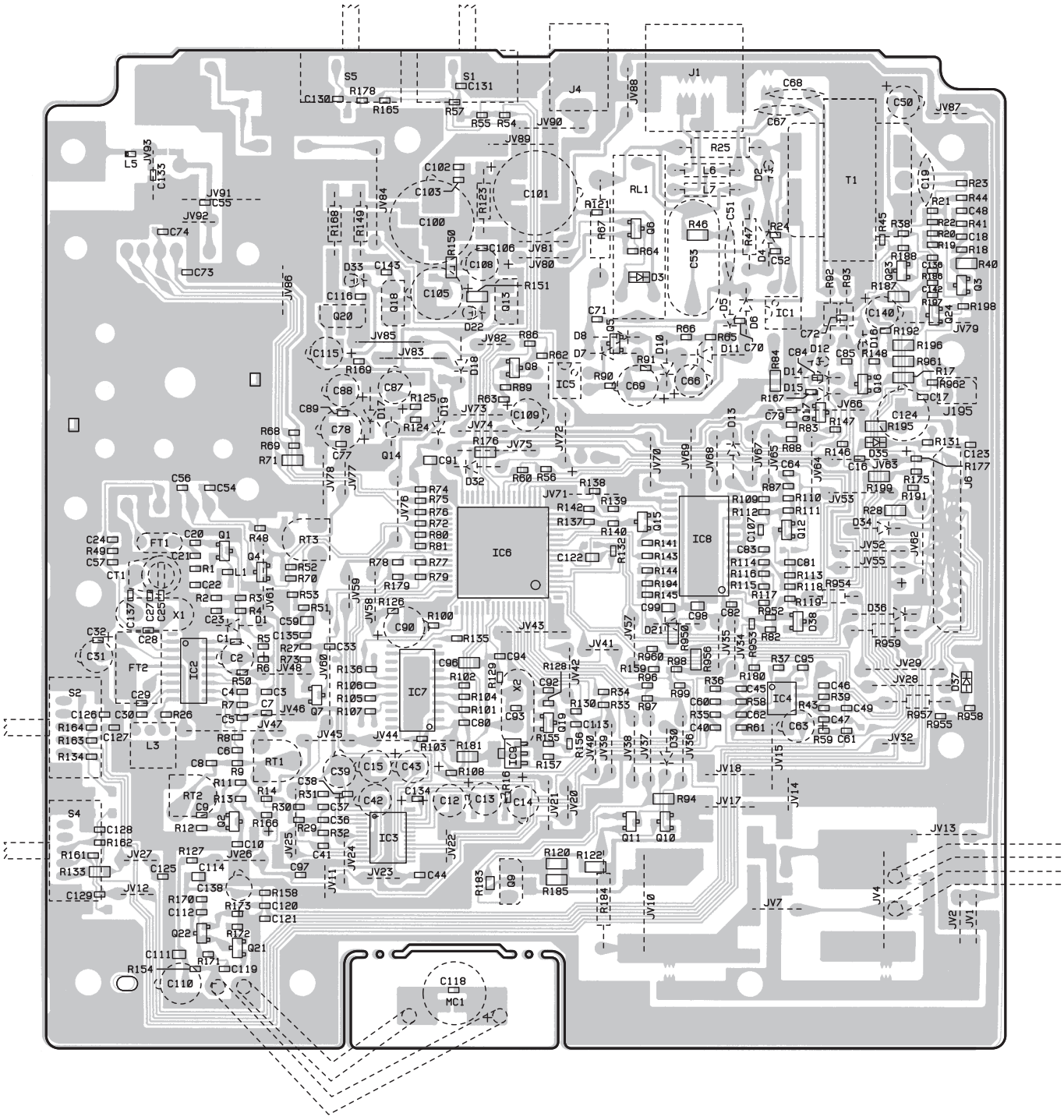
IC603
MB89538PFM



ELECTRICAL PARTS LOCATION

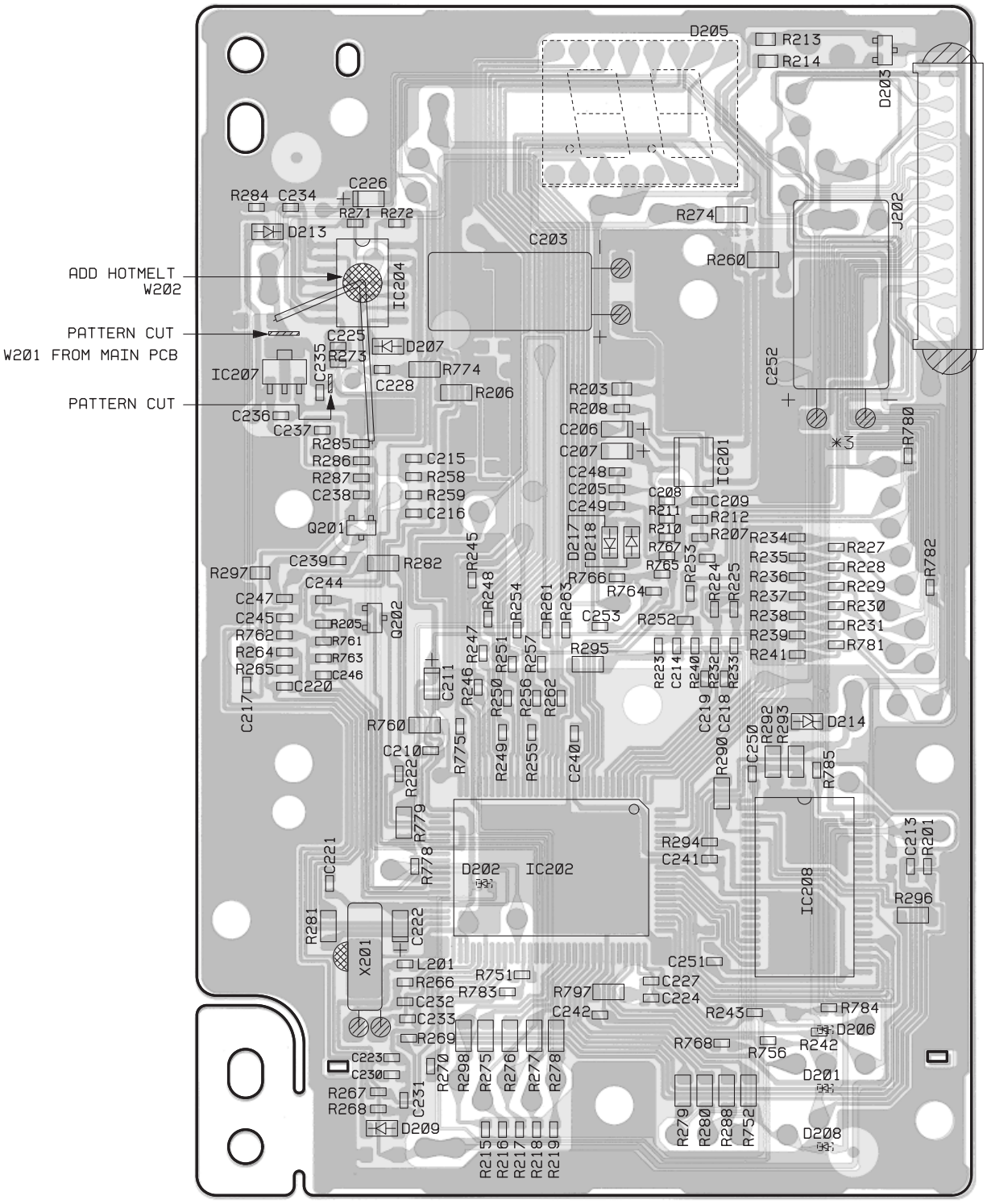
Base Unit

Main PCB

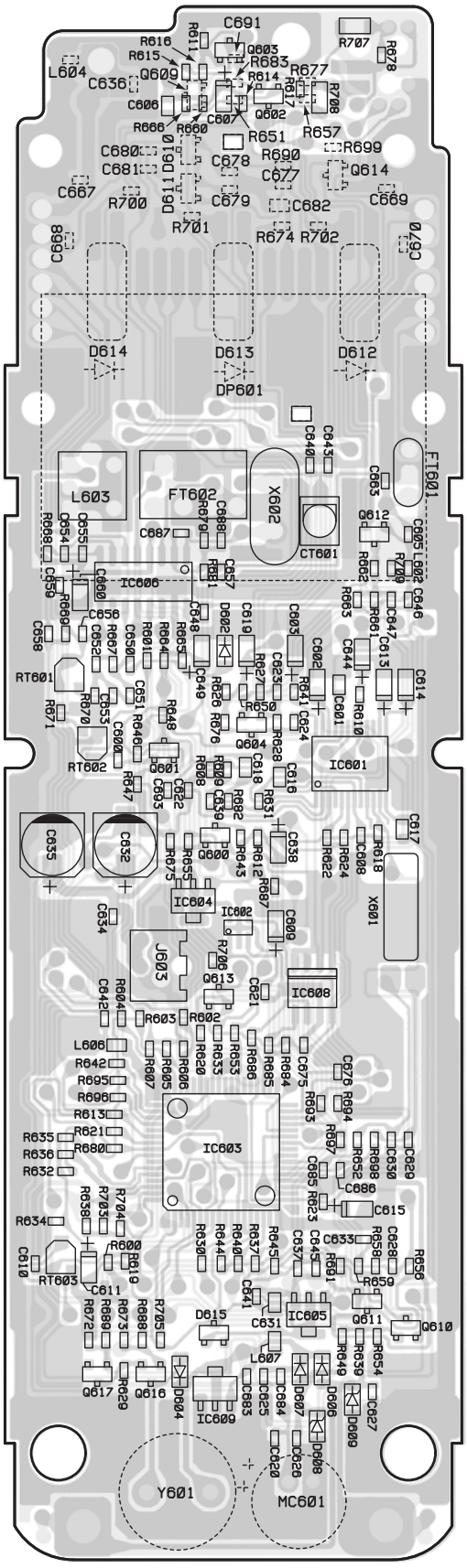


Base Unit

Key PCB

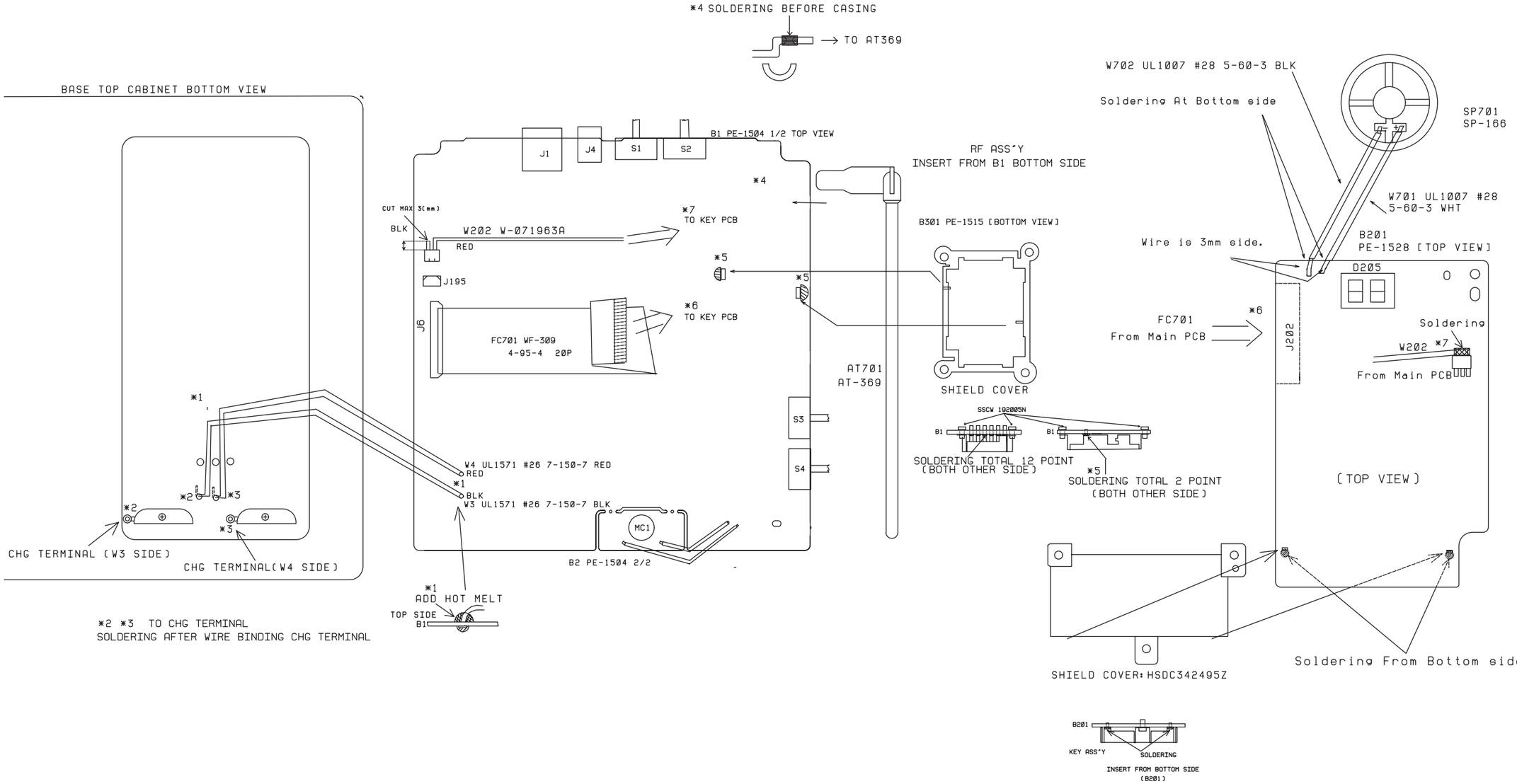


Handset
Main PCB

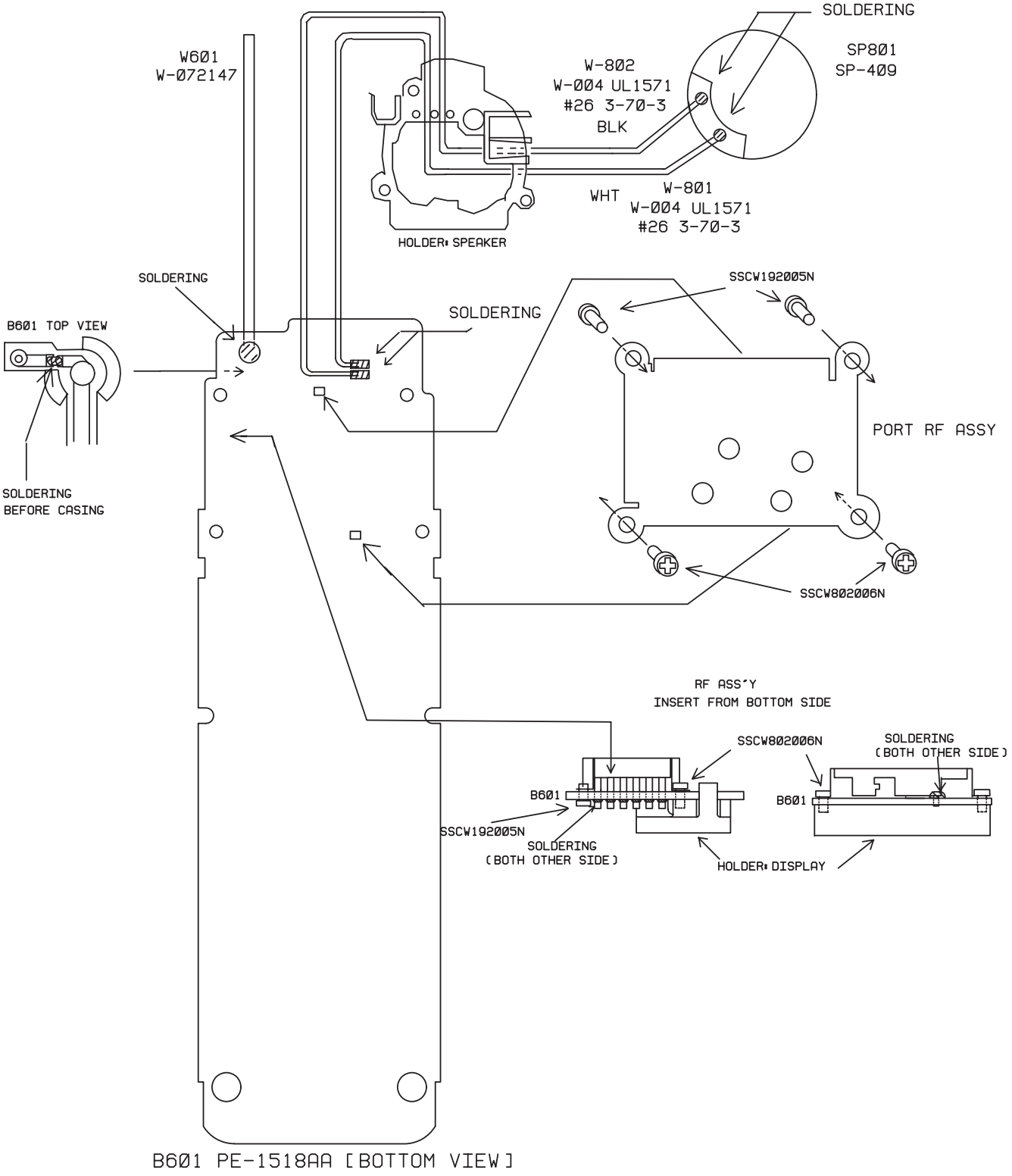


WIRING DIAGRAMS

Base Unit

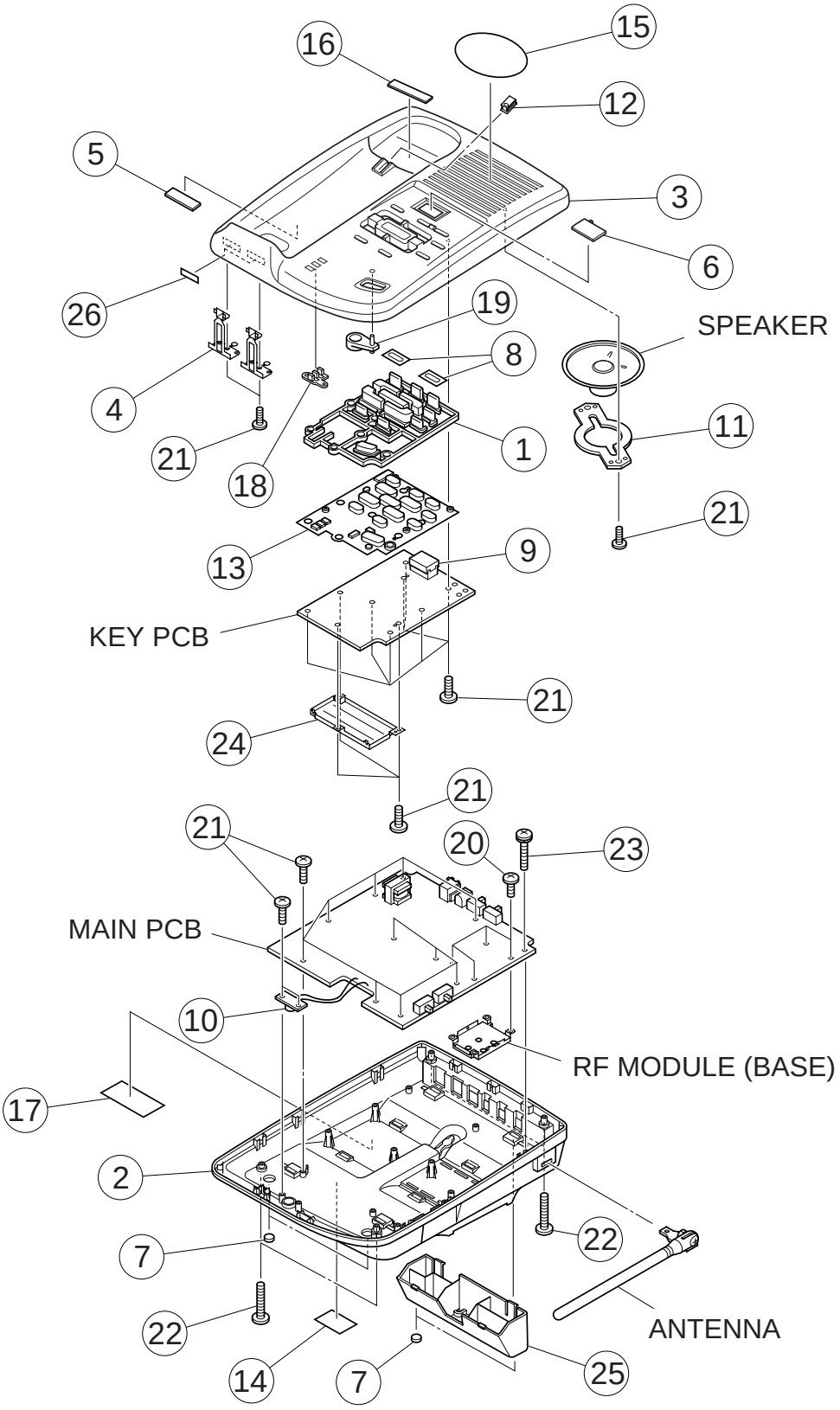


Handset


SOLDERING
SP801
SP-409
W601
W-072147
W-802
W-004 UL1571
#26 3-70-3
BLK
WHT
W-801
W-004 UL1571
#26 3-70-3
HOLDER: SPEAKER
SOLDERING
SSCW192005N
SOLDERING
B601 TOP VIEW
PORT RF ASSY
SOLDERING
BEFORE CASING
SSCW802006N
RF ASS'Y
INSERT FROM BOTTOM SIDE
SSCW802006N
SOLDERING
(BOTH OTHER SIDE)
B601
B601
SSCW192005N
SOLDERING
(BOTH OTHER SIDE)
HOLDER: DISPLAY
B601 PE-1518AA [BOTTOM VIEW]

EXPLODED VIEWS AND MECHANICAL PARTS LIST

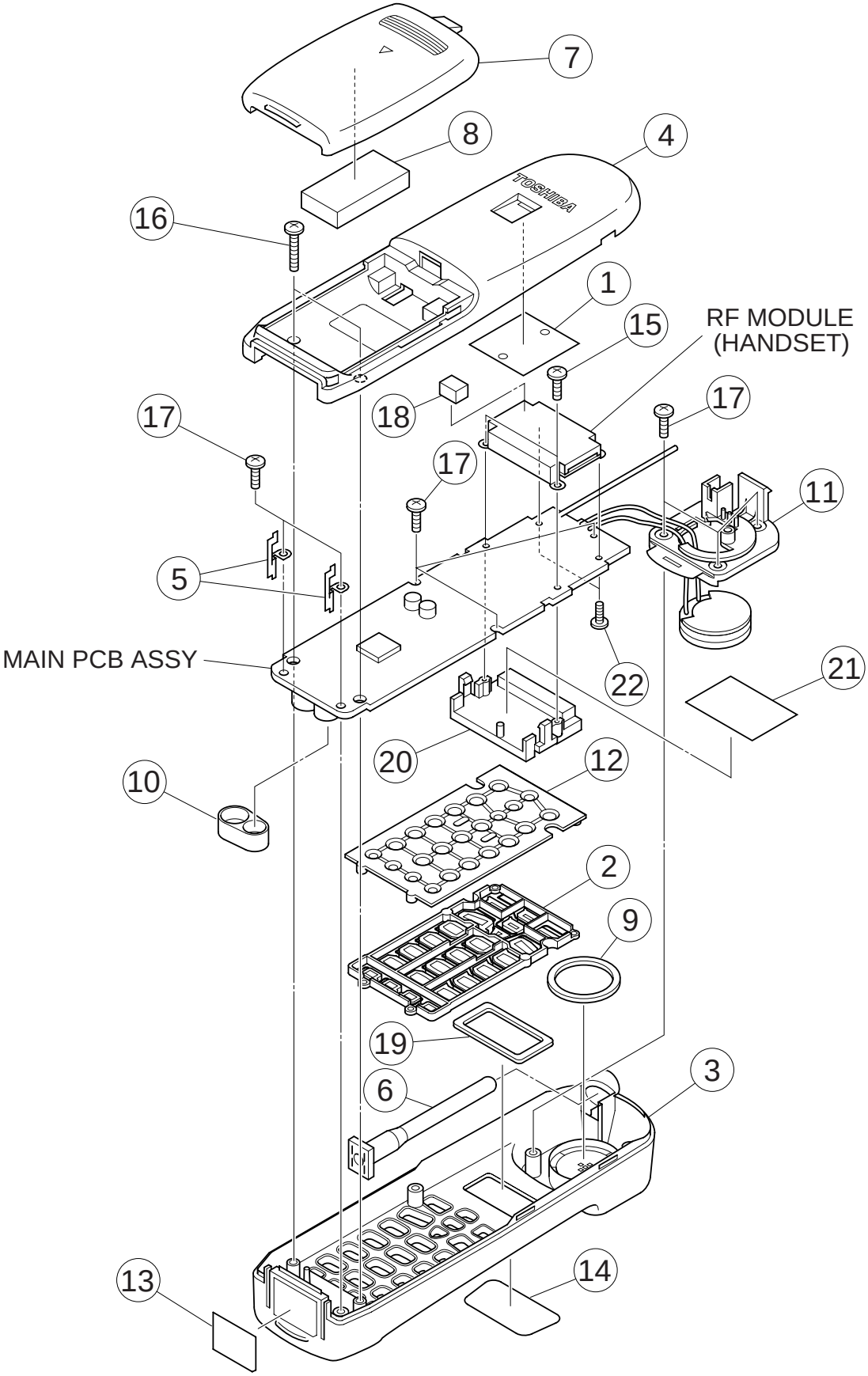
Base Unit



Base Unit

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION		QTY
1	RC008562	GNBZ442806Z	BUTTON, FUNCTION	ABS	1
2	RC008561	GCAS242805Z	CASE, BOTTOM	ABS	1
3	RC008560	GCAS242804A	CASE, TOP	ABS	1
4	RC008414	HTML442750Z	CHARGE TERMINAL	C5191(PBP)	2
5	RC005608	RCUN451804Z	CUSHION	NEOPRENE	1
6	RC005439	GCAS254442Z	DISPLAY WINDOW	PMMA	1
7	RC002384	LFUT428079Z	FOOT	BUMPON SJ-5916 1.6T	4
8	RC008013	RBLD459155A	HIMELON		2
9	RC008891	GHDZ350921Z	HOLDER, DISPLAY	ABS	1
10	RC005689	LHDZ453179Z	HOLDER, MIC	CR	1
11	RC005444	HHDS431080B	HOLDER, SPEAKER	SUS304 CSP 0.8T 3/4H OR H	1
12	RC005684	GCAS457909Z	HOOK	ABS	1
13	RC008499	LNBZ342500Z	KEY RUBBER	SI	1
14	RC008563	PLBB442998Z	LABEL, BARCODE	PAPER	1
15	RC008565	PLBZ442999Z	LABEL, INDICATION		1
16	RC005329	PLBZ456718Z	LABEL, INDICATION		1
17	RC008564	PLBZ442997Z	LABEL, TA	POLYESTER	1
18	RC008818	GCAS458189Z	LED LENS	PMMA	1
19	RC008939	GCAS458534Z	LED LENS	PMMA	1
20	RC008289	SSCW192005N	SCREW, BIND HD +	M2X5 NI	4
21	RC000941	SSCW802608N	SCREW, P TIGHT BIND HD +	D2.6X8 NI	26
22	RC004028	SSCW802616N	SCREW, P TIGHT BIND HD +	D2.6X16 NI	4
23	RC001752	SSCW283012N	SCREW, TAPPING BIND+& SP WASHER	D3X12 NI	1
24	RC008498	HSDC342495Z	SHIELD COVER	SPTE	1
25	RC005679	GCAS257876Z	STAND	ABS	1
26	RC005696	RUTC457032Z	WOOL COATED PAPER, WOOL TACK		2

Handset


7
8
4
TOSHIBA
16
1
15
RF MODULE
(HANDSET)
18
17
17
17
11
5
MAIN PCB ASSY
22
21
20
12
10
2
9
19
3
6
13
14

Handset

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION		QTY
1	RC008346	RBLD442400Z	BLIND	PC	1
2	RC008568	GNBZ442808Z	BUTTON, FUNCTION (COMP)	ABS	1
3	RC008567	GCAS342807Z	CASE, FRONT	ABS	1
4	RC008338	GCAS242332Z	CASE, REAR	ABS	1
5	RC008342	HTML442336Z	CHARGE TERMINAL	C2680(BSP)	2
6	RC008703	GCAS457897Z	COVER	ELASTOMER	1
7	RC008702	GCAS357889Z	COVER, BATTERY	ABS	1
8	RC008347	RCUM441150Z	CUSHION	MOLTPRENE,40*20*8	1
9	RC008348	RCUN442433Z	CUSHION	NEOPRENE	1
10	RC008709	LHDZ456969Z	HOLDER, MIC	EPDM	1
11	RC008339	GHDZ342333A	HOLDER, SPEAKER	ABS	1
12	RC008464	LNBZ342420Z	KEY RUBBER	SI	1
13	RC008572	PLBS443000Z	LABEL, ID		1
14	RC008571	KDPZ442811Z	PLATE, DISPLAY	PC	1
15	RC008289	SSCW192005N	SCREW, BIND HD +	M2X5 NI	2
16	RC003327	SSCW802610N	SCREW, P TIGHT BIND HD +	D2.6X10 NI	2
17	RC000941	SSCW802608N	SCREW, P TIGHT BIND HD +	D2.6X8 NI	8
18	RC008465	RCUN443255Z	CUSHION	NBR	1
19	RC008466	RCUN459780Z	CUSHION	NEOPRENE	1
20	RC008456	GHDZ459779Z	HOLDER, DISPLAY	PC	1
21	RC008457	RETC459777Z	REFLECTION SHEET		1
22	RC000940	SSCW802006N	SCREW, P TIGHT BIND HD +	D2X6 NI	2

PARTS LIST

PRODUCT SAFETY NOTE : Products marked with a ⚠ have special characteristics important to safety.
Before replacing any of these components, read carefully the product safety notice of this service manual.
Don't degrade the safety of the product through important servicing.

Symbol	F	G	J	K	M	N	Z	P
%	± 1	± 2	± 5	± 10	± 20	± 30	-20+80	0+100

Symbol	C	D
pF	± 0.25	± 0.5

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
CAPACITORS				
The following codes indicate variation of capacitors against temperatures,: **YA**=±5%, **YB**=±10%, **YD**=+20-30%, **YE**=+20-50%(-25~+85°C), **ZF**=+30-80%,(-10~+79°C), **CH**=0±60ppm/°C, **TH**=-470ppm/°C, ±60ppm/°C, **B**=±10%, **F**=+30-80%, **SL**=+350ppm/°C~-1000ppm/°C, **UJ**=-750ppm/°C ±120ppm/°C, **CJ**=0±120ppm/°C, **CK**=0±250ppm/°C				
C1	RC005216	BCMM813304Z	CERAMIC M/L (1608) TAPE	33PF 50V J CH
C2	RC001807	BCAZ812296Z	ELECTROLYTIC	2.2UF 50V M C-156
C3	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C4	RC005214	BCMM812214Z	CERAMIC M/L (1608) TAPE	220PF 50V J CH
C5	RC005214	BCMM812214Z	CERAMIC M/L (1608) TAPE	220PF 50V J CH
C6	RC005216	BCMM813304Z	CERAMIC M/L (1608) TAPE	33PF 50V J CH
C7	RC005217	BCMM813314Z	CERAMIC M/L (1608) TAPE	330PF 50V J CH
C8	RC005208	BCML814725Z	CERAMIC M/L (1608) TAPE	0.0047UF 50V K B
C9	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C10	RC005418	BCML312735Z	CERAMIC M/L (1608) TAPE	0.027UF 16V K B
C12	RC001809	BCAZ814786Z	ELECTROLYTIC	0.47UF 50V M C-156
C13	RC001810	BCAZ814796Z	ELECTROLYTIC	4.7UF 50V M C-156
C14	RC001810	BCAZ814796Z	ELECTROLYTIC	4.7UF 50V M C-156
C15	RC004138	BCAZ811006Z	ELECTROLYTIC	10UF 50V M C-156
C16	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C17	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C18	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C19	RC000777	BCZY0120001	SEMI-CONDUCTOR	CZ-120 0.022UF 18V
C20	RC005219	BCMM814704Z	CERAMIC M/L (1608) TAPE	47PF 50V J CH
C21	RC008271	BCMM813904Z	CERAMIC M/L (1608) TAPE	39PF 50V J CH
C22	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C23	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C24	RC005216	BCMM813304Z	CERAMIC M/L (1608) TAPE	33PF 50V J CH
C25	RC005212	BCMM811504Z	CERAMIC M/L (1608) TAPE	15PF 50V J CH
C27	RC008753	BCMM812098Z	CERAMIC M/L (1608) TAPE	2PF 50V B CH
C28	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C29	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C30	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C31	RC001810	BCAZ814796Z	ELECTROLYTIC	4.7UF 50V M C-156
C32	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C33	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C36	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C37	RC008270	BCML811235Z	CERAMIC M/L (1608) TAPE	0.012UF 50V K B
C38	RC008318	BCML815625Z	CERAMIC M/L (1608) TAPE	0.0056UF 50V K B
C39	RC001809	BCAZ814786Z	ELECTROLYTIC	0.47UF 50V M C-156
C40	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C41	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C42	RC001805	BCAZ811096Z	ELECTROLYTIC	1UF 50V M C-156
C43	RC001802	BCAZ314706Z	ELECTROLYTIC	47UF 16V M C-156
C44	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C45	RC005420	BCMM811514Z	CERAMIC M/L (1608) TAPE	150PF 50V J CH
C46	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C47	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C48	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C49	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C50	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156
C51	RC000752	BCKB821025Z	CERAMIC	0.001UF 500V K YB(B)
C52	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C53	RC008111	BCZY0259001	MYLAR METALLIZED	CZ-259 1UF 250V
C54	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C55	RC005360	BCMM816092Z	CERAMIC M/L (1608) TAPE	6PF 50V D CH
C56	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C57	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C59	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C60	RC005206	BCML812225Z	CERAMIC M/L (1608) TAPE	0.0022UF 50V K B
C61	RC008146	BCML816825Z	CERAMIC M/L (1608) TAPE	0.0068UF 50V K B
C62	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C63	RC005468	BCEQ904706Z	ELECTROLYTIC	47UF 6.3V M C-125
C64	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C66	RC001805	BCAZ811096Z	ELECTROLYTIC	1UF 50V M C-156
C67	RC005512	BCKB131025Z	CERAMIC	0.001UF 1000V K YB(B)
C68	RC005512	BCKB131025Z	CERAMIC	0.001UF 1000V K YB(B)
C69	RC004167	BCAZ511016Z	ELECTROLYTIC	100UF 25V M C-156
C70	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C71	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C72	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C73	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C74	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C77	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C78	RC004445	BCAZ903316Z	ELECTROLYTIC	330UF 6.3V M C-156
C79	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C80	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C81	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C82	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C83	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C84	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C85	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C87	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156
C88	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C89	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C90	RC008548	BCEQ902216Z	ELECTROLYTIC	220UF 6.3V M C-125
C91	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C92	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C93	RC005215	BCMM812704Z	CERAMIC M/L (1608) TAPE	27PF 50V J CH
C94	RC005215	BCMM812704Z	CERAMIC M/L (1608) TAPE	27PF 50V J CH
C95	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C96	RC002850	BCXS811025Z	CERAMIC M/L (3216) TAPE	0.001UF 50V K B
C97	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C98	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C99	RC002229	BCXT511045Z	CERAMIC M/L (2125) TAPE	0.1UF 25V K B
C100	RC005322	BCAZ312226Z	ELECTROLYTIC	2200UF 16V M C-156
C101	RC005322	BCAZ312226Z	ELECTROLYTIC	2200UF 16V M C-156
C102	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C103	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C105	RC008106	BCAZ313316Z	ELECTROLYTIC	330UF 16V M C-156
C106	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C107	RC005203	BCML512235Z	CERAMIC M/L (1608) TAPE	0.022UF 25V K B
C108	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156
C109	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156
C110	RC001046	BCEQ901016Z	ELECTROLYTIC	100UF 6.3V M C-125
C111	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C112	RC005276	BCML818225Z	CERAMIC M/L (1608) TAPE	0.0082UF 50V K B
C113	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C114	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C115	RC001794	BCAZ111016Z	ELECTROLYTIC	100UF 10V M C-156
C116	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C118	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C119	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C120	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C121	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C122	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C123	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C124	RC001796	BCAZ113316Z	ELECTROLYTIC	330UF 10V M C-156
C125	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C126	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C127	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C128	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C129	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C130	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C131	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C133	RC005218	BCMM814091Z	CERAMIC M/L (1608) TAPE	4PF 50V C CH
C134	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C135	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C136	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C137	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C138	RC001045	BCEQ311006Z	ELECTROLYTIC	10UF 16V M C-125

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C140	RC001802	BCAZ314706Z	ELECTROLYTIC	47UF 16V M C-156
C142	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C143	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C203	RC001811	BCAZ901016Z	ELECTROLYTIC	100UF 6.3V M C-156
C205	RC008146	BCML816825Z	CERAMIC M/L (1608) TAPE	0.0068UF 50V K B
C206	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C207	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C208	RC005219	BCMM814704Z	CERAMIC M/L (1608) TAPE	47PF 50V J CH
C209	RC008485	BCMM813914Z	CERAMIC M/L (1608) TAPE	390PF 50V J CH
C210	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C211	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C213	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C214	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C215	RC005207	BCML813325Z	CERAMIC M/L (1608) TAPE	0.0033UF 50V K B
C216	RC008926	BCMM518214Z	CERAMIC M/L (1608) TAPE	820PF 25V J CH
C217	RC008270	BCML811235Z	CERAMIC M/L (1608) TAPE	0.012UF 50V K B
C218	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C219	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C220	RC005206	BCML812225Z	CERAMIC M/L (1608) TAPE	0.0022UF 50V K B
C221	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C222	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C223	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C224	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C225	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C226	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C227	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C228	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C230	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C231	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C232	RC005209	BCMM811002Z	CERAMIC M/L (1608) TAPE	10PF 50V D CH
C233	RC005209	BCMM811002Z	CERAMIC M/L (1608) TAPE	10PF 50V D CH
C234	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C235	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C236	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C237	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C238	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C239	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C240	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C241	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C242	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C244	RC005203	BCML512235Z	CERAMIC M/L (1608) TAPE	0.022UF 25V K B
C245	RC008926	BCMM518214Z	CERAMIC M/L (1608) TAPE	820PF 25V J CH
C246	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C247	RC005274	BCML811535Z	CERAMIC M/L (1608) TAPE	0.015UF 50V K B
C248	RC005274	BCML811535Z	CERAMIC M/L (1608) TAPE	0.015UF 50V K B
C249	RC005208	BCML814725Z	CERAMIC M/L (1608) TAPE	0.0047UF 50V K B
C250	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C251	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C252	RC008884	BCAZ904716Z	ELECTROLYTIC	470UF 6.3V M C-156
C253	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C600	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C601	RC004347	BCXK514740Z	CERAMIC M/L (2125) TAPE	0.47UF 25V Z F
C602	RC008319	BCSH904796Z	TANTALUM CHIP TAPE	4.7UF 6.3V M C-122
C603	RC008319	BCSH904796Z	TANTALUM CHIP TAPE	4.7UF 6.3V M C-122
C605	RC005216	BCMM813304Z	CERAMIC M/L (1608) TAPE	33PF 50V J CH
C606	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C607	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C608	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C609	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C610	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C611	RC008446	BCSH311096Z	TANTALUM CHIP	1UF 16V M C-122 TAPE
C613	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C614	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C615	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C616	RC004347	BCXK514740Z	CERAMIC M/L (2125) TAPE	0.47UF 25V Z F
C617	RC004347	BCXK514740Z	CERAMIC M/L (2125) TAPE	0.47UF 25V Z F
C618	RC002594	BCXT516835Z	CERAMIC M/L (2125) TAPE	0.068UF 25V K B
C619	RC008296	BCSH901006Z	TANTALUM CHIP TAPE	10UF 6.3V M C-122
C620	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C621	RC005203	BCML512235Z	CERAMIC M/L (1608) TAPE	0.022UF 25V K B
C622	RC008318	BCML815625Z	CERAMIC M/L (1608) TAPE	0.0056UF 50V K B
C623	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C624	RC008268	BCML314735Z	CERAMIC M/L (1608) TAPE	0.047UF 16V K B
C625	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C628	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C629	RC005212	BCMM811504Z	CERAMIC M/L (1608) TAPE	15PF 50V J CH
C630	RC005212	BCMM811504Z	CERAMIC M/L (1608) TAPE	15PF 50V J CH
C631	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C632	RC004902	BCFZ111016Z	ELECTROLYTIC	100UF 10V M C-258
C633	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C634	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C635	RC004902	BCFZ111016Z	ELECTROLYTIC	100UF 10V M C-258
C636	RC005209	BCMM811002Z	CERAMIC M/L (1608) TAPE	10PF 50V D CH
C637	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C638	RC008446	BCSH311096Z	TANTALUM CHIP	1UF 16V M C-122 TAPE
C639	RC008270	BCML811235Z	CERAMIC M/L (1608) TAPE	0.012UF 50V K B
C640	RC005213	BCMM811804Z	CERAMIC M/L (1608) TAPE	18PF 50V J CH
C641	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C642	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C643	RC008755	BCMM815098Z	CERAMIC M/L (1608) TAPE	5PF 50V B CH
C644	RC008446	BCSH311096Z	TANTALUM CHIP	1UF 16V M C-122 TAPE
C645	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C646	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C647	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
C648	RC005216	BCMM813304Z	CERAMIC M/L (1608) TAPE	33PF 50V J CH
C649	RC008447	BCSH312296Z	TANTALUM CHIP	2.2UF 16V M C-122 TAPE
C650	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C651	RC005214	BCMM812214Z	CERAMIC M/L (1608) TAPE	220PF 50V J CH
C652	RC005214	BCMM812214Z	CERAMIC M/L (1608) TAPE	220PF 50V J CH
C653	RC005217	BCMM813314Z	CERAMIC M/L (1608) TAPE	330PF 50V J CH
C654	RC008268	BCML314735Z	CERAMIC M/L (1608) TAPE	0.047UF 16V K B
C655	RC008268	BCML314735Z	CERAMIC M/L (1608) TAPE	0.047UF 16V K B
C656	RC005216	BCMM813304Z	CERAMIC M/L (1608) TAPE	33PF 50V J CH
C657	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C658	RC005208	BCML814725Z	CERAMIC M/L (1608) TAPE	0.0047UF 50V K B
C659	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C660	RC008319	BCSH904796Z	TANTALUM CHIP TAPE	4.7UF 6.3V M C-122
C663	RC005209	BCMM811002Z	CERAMIC M/L (1608) TAPE	10PF 50V D CH
C667	RC005222	BCMS811091Z	CERAMIC M/L (1608) TAPE	1PF 50V C CK
C668	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C669	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C670	RC005210	BCMM811014Z	CERAMIC M/L (1608) TAPE	100PF 50V J CH
C675	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C676	RC005204	BCML811025Z	CERAMIC M/L (1608) TAPE	0.001UF 50V K B
C677	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C678	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C679	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C680	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C681	RC005202	BCML311045Z	CERAMIC M/L (1608) TAPE	0.1UF 16V K B
C682	RC008731	BCXK311050Z	CERAMIC M/L (2125) TAPE	1UF 16V Z F
C683	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C684	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C685	RC005209	BCMM811002Z	CERAMIC M/L (1608) TAPE	10PF 50V D CH
C686	RC005209	BCMM811002Z	CERAMIC M/L (1608) TAPE	10PF 50V D CH
C687	RC005220	BCMM816804Z	CERAMIC M/L (1608) TAPE	68PF 50V J CH
C688	RC005219	BCMM814704Z	CERAMIC M/L (1608) TAPE	47PF 50V J CH
C691	RC005205	BCML811035Z	CERAMIC M/L (1608) TAPE	0.01UF 50V K B
C693	RC005203	BCML512235Z	CERAMIC M/L (1608) TAPE	0.022UF 25V K B
CT1	RC008272	BCTY0076100	TRIMMER	CT-076 TZ3Z100FR 10PF
CT601	RC005226	BCTY0096100	TRIMMER	CT-096 CTZ3S10A-W1PF55
DIODES				
D1	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D2	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D3	RC001826	BDAY0433001		RLS4148 TE11
D4	RC002470	BDAY0492033	ZENER AX TS 26 +	HZ7C3 TD
D5	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D6	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D7	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D8	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D10	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D11	RC003194	BDAY0272010	ZENER	HZ33CP

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
D12	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D13	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D14	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D15	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D16	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D17	RC008273	BDAY0492036	ZENER AX TS 26 +	HZ4B1 TD
D18	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D19	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D20	RC003195	BDAY0432004	ZENER	HZK6C TR
D21	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D22	RC003196	BDAY0492025	ZENER AX TS 26 +	HZ7A1 TD
D30	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D32	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D33	RC008549	BDAY0269038	ZENER	HZ4C3
D34	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D35	RC001826	BDAY0433001		RLS4148 TE11
D36	RC002236	BDAY0246003	AX TS 26+	1N4148 T-77
D37	RC001826	BDAY0433001		RLS4148 TE11
D38	RC008448	BDAY1065001		RB420D T146
D201	RC008320	BDAY1092001	LED	SML-310LT T86
D202	RC008407	BDAY1060001	LED	SML-310MT T86
D203	RC008486	BDAY1091001	ZENER	NNCD6.2F-T1B
D205	RC005412	BDAY0825001	LED	LTD-482P-03
D206	RC008407	BDAY1060001	LED	SML-310MT T86
D207	RC001826	BDAY0433001		RLS4148 TE11
D208	RC008320	BDAY1092001	LED	SML-310LT T86
D209	RC001826	BDAY0433001		RLS4148 TE11
D213	RC001826	BDAY0433001		RLS4148 TE11
D214	RC003195	BDAY0432004	ZENER	HZK6C TR
D217	RC001826	BDAY0433001		RLS4148 TE11
D218	RC001826	BDAY0433001		RLS4148 TE11
D602	RC001826	BDAY0433001		RLS4148 TE11
D604	RC001826	BDAY0433001		RLS4148 TE11
D606	RC001826	BDAY0433001		RLS4148 TE11
D607	RC001826	BDAY0433001		RLS4148 TE11
D608	RC003195	BDAY0432004	ZENER	HZK6C TR
D609	RC003195	BDAY0432004	ZENER	HZK6C TR
D610	RC001635	BDAY0274001		1SS226 TE85L
D611	RC001635	BDAY0274001		1SS226 TE85L
D612	RC005534	BDAY0931001	LED	PG3822K
D613	RC005534	BDAY0931001	LED	PG3822K
D614	RC005534	BDAY0931001	LED	PG3822K
D615	RC008448	BDAY1065001		RB420D T146
FILTERS				
FT1	RC008279	BFLY0971001	CERAMIC	FL-971 FFE1054NA11UXL
FT2	RC008280	BFLY0974001	CERAMIC	FL-974 KBF-455RL-30K2
FT601	RC008279	BFLY0971001	CERAMIC	FL-971 FFE1054NA11UXL

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
FT602	RC008280	BFLY0974001	CERAMIC	FL-974 KBF-455RL-30K2
IC's				
IC1	RC001640	BDEY1146001		⚠ PC817CD
IC2	RC004870	BDEY2768003		MC3361CDR2
IC3	RC008278	BDEY3870003		LA8633VU-TLM
IC4	RC004045	BDEY0861002		M5223FP-600C TAPE
IC5	RC001640	BDEY1146001		⚠ PC817CD
IC6	RC008550	BDDY0923001	UC2382	UPD75116HGC-196-AB8
IC7	RC005516	BDEY1058003		LC7366NM-TP-T2
IC8	RC008809	BDEY3544003		MT88E43ASR
IC9	RC005075	BDEY2938003		RH5VL40CA-T1
IC201	RC005423	BDEY1533003		MC34119D R2
IC202	RC008487	BDDY0992001	UC2369A SEL	D16559UAA11EQC-3V
IC204	RC008488	BDEY1749003		TC74HC00AF(EL)
IC207	RC004595	BDEY2486003		RH5VL45AA-T1
IC208	RC008489	BDEY3868001		KM29W040AT
IC601	RC008278	BDEY3870003		LA8633VU-TLM
IC602	RC008322	BDEY3882003		TK11130SCL
IC603	RC008566	BDDY0924001	UC2383	MB89538PFM-G-131-BND
IC604	RC008861	BDEY2989003		RH5VL33AA-T1
IC605	RC005074	BDEY2937003		RH5VL28CA-T1
IC606	RC004870	BDEY2768003		MC3361CDR2
IC608	RC008799	BDEY3181003		24LC16BT/SN
IC609	RC008859	BDEY2927003		RH5RE32AA-T1
JACKS				
J1	RC003586	BJKY0803002	TEL	⚠ JK-803 A36-006-4910A 2P
J4	RC001094	BJKY0234001		JK-234 DJ13-1
J6	RC005650	BJKY0944020		JK-944 IMSA-9604S-20C 20P
J195	RC002252	BJKY0600002		JK-600 SB20-02WS 2P
J202	RC005649	BJKY0943020		JK-943 9604S-20F 20P
J603	RC001653	BJKY0571001		JK-571 M60-002-020-HKAD
COILS				
L1	RC008282	BLZY0136399	INDUCTOR:MOLDED CHIP	LZ136 MLF1608A3R9KT 3.9UH
L3	RC008281	BLBY1175001	COIL	LB-1175 7002BE-A0026HM
L5	RC008451	BLZY0181826	INDUCTOR:MOLDED CHIP TAPE	LZ-181 8.2NH
L6	RC005404	BLZY0051100	INDUCTOR:MOLDED	LZ-051 SP0305-100K-2 10UH
L7	RC005404	BLZY0051100	INDUCTOR:MOLDED	LZ-051 SP0305-100K-2 10UH
L201	RC008490	BLZY0203102	INDUCTOR:MOLDED CHIP	LZ-203 MMZ1608R102AT 1000
L602	RC008397	BLZY0136100	INDUCTOR:MOLDED CHIP	LZ-136 MLF1608K100KT 10UH
L603	RC008281	BLBY1175001	COIL	LB-1175 7002BE-A0026HM
L604	RC008451	BLZY0181826	INDUCTOR:MOLDED CHIP TAPE	LZ-181 8.2NH
L606	RC005540	BLZY0080100	INDUCTOR:MOLDED(CHIP)	LZ-080 10UH K TAPE
L607	RC005540	BLZY0080100	INDUCTOR:MOLDED(CHIP)	LZ-080 10UH K TAPE
T1	RC003234	BTFY0265001	TRANSFORMER:HYBRID	⚠ TF-265 AT-24E7-1B/R295403
TRANSISTORS				
Q1	RC002245	BDBC2714124		DB-718 2SC2714-Y TE85L
Q2	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
Q3	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q4	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q5	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q6	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q7	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q8	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q9	RC003200	BDBD0471111		DB-411 2SD471-L
Q10	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q11	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q12	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q13	RC003200	BDBD0471111		DB-411 2SD471-L
Q14	RC000799	BDBC2120124		DB-300 2SC2120-Y
Q15	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q16	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q17	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q18	RC003200	BDBD0471111		DB-411 2SD471-L
Q19	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q20	RC003200	BDBD0471111		DB-411 2SD471-L
Q21	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q22	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q23	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q24	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q201	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q202	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q600	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q601	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q602	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q603	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q604	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q609	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q610	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q611	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q612	RC002245	BDBC2714124		DB-718 2SC2714-Y TE85L
Q613	RC008275	BDBA0812695		DB-035 2SA812(M)-M6A T1B
Q614	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q616	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
Q617	RC003031	BDBC1623648		DB-380 2SC1623-L6 T1B
RESISTORS				
R1	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R2	RC005249	BRFC162244Z	CARBON FIXED CHIP	220K 1/16W J TAPING
R3	RC005259	BRFC166814Z	CARBON FIXED CHIP	680 1/16W J TAPING
R4	RC005255	BRFC164714Z	CARBON FIXED CHIP	470 1/16W J TAPING
R5	RC005245	BRFC161834Z	CARBON FIXED CHIP	18K 1/16W J TAPING
R6	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R7	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R8	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R9	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R11	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R12	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R13	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R14	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R16	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R17	RC001790	BRFC181534Z	CARBON FIXED CHIP	15K 1/8W J TAPING
R18	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R19	RC005286	BRFC165644Z	CARBON FIXED CHIP	560K 1/16W J TAPING
R20	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R21	RC005261	BRFC168224Z	CARBON FIXED CHIP	8.2K 1/16W J TAPING
R22	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J TAPING
R23	RC005259	BRFC166814Z	CARBON FIXED CHIP	680 1/16W J TAPING
R24	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R25	RC002350	BRSN101514Z	METAL OXIDE(FORMED)	⚠ 150 1W J (P=12.5)
R26	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R27	RC005245	BRFC161834Z	CARBON FIXED CHIP	18K 1/16W J TAPING
R28	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R29	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R30	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R31	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R32	RC008286	BRFC162744Z	CARBON FIXED CHIP	270K 1/16W J TAPING
R33	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R34	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R35	RC005249	BRFC162244Z	CARBON FIXED CHIP	220K 1/16W J TAPING
R36	RC008767	BRFC163344Z	CARBON FIXED CHIP	330K 1/16W J TAPING
R37	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R38	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J TAPING
R39	RC005284	BRFC163334Z	CARBON FIXED CHIP	33K 1/16W J TAPING
R40	RC008482	BRFC186804Z	CARBON FIXED CHIP	68 1/8W J TAPING
R41	RC005259	BRFC166814Z	CARBON FIXED CHIP	680 1/16W J TAPING
R43	RC008027	BRFC161234Z	CARBON FIXED CHIP	12K 1/16W J TAPING
R44	RC008030	BRFC165624Z	CARBON FIXED CHIP	5.6K 1/16W J TAPING
R45	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R46	RC002335	BRFC183314Z	CARBON FIXED CHIP	330 1/8W J TAPING
R47	RC003231	BRSJ222234Z	METAL OXIDE	⚠ 22K 1/2WS J
R48	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R49	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R50	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R51	RC005278	BRFC161244Z	CARBON FIXED CHIP	120K 1/16W J TAPING
R52	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R53	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R54	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R55	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R56	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R57	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R58	RC008286	BRFC162744Z	CARBON FIXED CHIP	270K 1/16W J TAPING
R59	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R60	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R61	RC005261	BRFC168224Z	CARBON FIXED CHIP	8.2K 1/16W J TAPING
R62	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R63	RC008767	BRFC163344Z	CARBON FIXED CHIP	330K 1/16W J TAPING
R64	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R65	RC008734	BRFC162254Z	CARBON FIXED CHIP	2.2M 1/16W J TAPING
R66	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R67	RC004183	BRSJ001024Z	METAL OXIDE	⚠ 1K 1WS J
R68	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R69	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R70	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R71	RC001790	BRFC181534Z	CARBON FIXED CHIP	15K 1/8W J TAPING
R72	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R73	RC005278	BRFC161244Z	CARBON FIXED CHIP	120K 1/16W J TAPING
R74	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R75	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R76	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R77	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R78	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R79	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R80	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R81	RC005283	BRFC162734Z	CARBON FIXED CHIP	27K 1/16W J TAPING
R82	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R83	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R84	RC001788	BRFC181034Z	CARBON FIXED CHIP	10K 1/8W J TAPING
R86	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R87	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R88	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R89	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R90	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R91	RC008479	BRFC161844Z	CARBON FIXED CHIP	180K 1/16W J TAPING
R92	RC008558	BRPA613944Z	CARBON AX TS 26	390K 1/6W J TAPING
R93	RC008558	BRPA613944Z	CARBON AX TS 26	390K 1/6W J TAPING
R94	RC001788	BRFC181034Z	CARBON FIXED CHIP	10K 1/8W J TAPING
R96	RC008029	BRFC163924Z	CARBON FIXED CHIP	3.9K 1/16W J TAPING
R97	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R98	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R99	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R100	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R101	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R102	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R103	RC005255	BRFC164714Z	CARBON FIXED CHIP	470 1/16W J TAPING
R104	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R105	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R106	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R107	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R108	RC005434	BRFC163914Z	CARBON FIXED CHIP	390 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R109	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R110	RC005259	BRFC166814Z	CARBON FIXED CHIP	680 1/16W J TAPING
R111	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R112	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R113	RC005261	BRFC168224Z	CARBON FIXED CHIP	8.2K 1/16W J TAPING
R114	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J TAPING
R115	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R116	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R117	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R118	RC005262	BRFC168234Z	CARBON FIXED CHIP	82K 1/16W J TAPING
R119	RC005262	BRFC168234Z	CARBON FIXED CHIP	82K 1/16W J TAPING
R120	RC008483	BRFC188204Z	CARBON FIXED CHIP	82 1/8W J TAPING
R121	RC005246	BRFC162204Z	CARBON FIXED CHIP	22 1/16W J TAPING
R122	RC008483	BRFC188204Z	CARBON FIXED CHIP	82 1/8W J TAPING
R123	RC005411	BRSJ221004Z	METAL OXIDE BULK	10 1/2WS J
R124	RC005279	BRFC161514Z	CARBON FIXED CHIP	150 1/16W J TAPING
R125	RC005279	BRFC161514Z	CARBON FIXED CHIP	150 1/16W J TAPING
R126	RC005246	BRFC162204Z	CARBON FIXED CHIP	22 1/16W J TAPING
R127	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R128	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R129	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R130	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R131	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R132	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R133	RC008555	BRFC184724Z	CARBON FIXED CHIP	4.7K 1/8W J TAPING
R134	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R135	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R136	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R137	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R138	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R139	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R140	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R141	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R142	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R143	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R144	RC008553	BRFC161043Z	CARBON FIXED CHIP	100K 1/16W F TAPING
R145	RC008554	BRFC165643Z	CARBON FIXED CHIP	560K 1/16W F TAPING
R146	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R147	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R148	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R149	RC005411	BRSJ221004Z	METAL OXIDE BULK	10 1/2WS J
R150	RC008481	BRFC181514Z	CARBON FIXED CHIP	150 1/8W J TAPING
R151	RC008481	BRFC181514Z	CARBON FIXED CHIP	150 1/8W J TAPING
R154	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R155	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R156	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R157	RC008734	BRFC162254Z	CARBON FIXED CHIP	2.2M 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R158	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R159	RC008735	BRFC166824Z	CARBON FIXED CHIP	6.8K 1/16W J TAPING
R161	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R162	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R163	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R164	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R165	RC008735	BRFC166824Z	CARBON FIXED CHIP	6.8K 1/16W J TAPING
R166	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R167	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R168	RC005411	BRSJ221004Z	METAL OXIDE BULK	10 1/2WS J
R169	RC005282	BRFC162714Z	CARBON FIXED CHIP	270 1/16W J TAPING
R170	RC005261	BRFC168224Z	CARBON FIXED CHIP	8.2K 1/16W J TAPING
R171	RC005286	BRFC165644Z	CARBON FIXED CHIP	560K 1/16W J TAPING
R172	RC005247	BRFC162214Z	CARBON FIXED CHIP	220 1/16W J TAPING
R173	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R175	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R176	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R177	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R178	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R179	RC005242	BRFC161044Z	CARBON FIXED CHIP	00K 1/16W J TAPING
R180	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R181	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R183	RC002296	BRFC011024Z	CARBON FIXED CHIP	1K 1/10W J TAPING
R184	RC008484	BRFT124714Z	CARBON AXIAL LEAD(TAPE)	470 1/2W J
R185	RC008482	BRFC186804Z	CARBON FIXED CHIP	68 1/8W J TAPING
R186	RC008480	BRFC166844Z	CARBON FIXED CHIP	680K 1/16W J TAPING
R187	RC002812	BRFC183324Z	CARBON FIXED CHIP	3.3K 1/8W J TAPING
R188	RC005247	BRFC162214Z	CARBON FIXED CHIP	220 1/16W J TAPING
R191	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R192	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R194	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R195	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R196	RC002808	BRFC182224Z	CARBON FIXED CHIP	2.2K 1/8W J TAPING
R197	RC008480	BRFC166844Z	CARBON FIXED CHIP	680K 1/16W J TAPING
R198	RC005252	BRFC163314Z	CARBON FIXED CHIP	330 1/16W J TAPING
R199	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R201	RC005434	BRFC163914Z	CARBON FIXED CHIP	390 1/16W J TAPING
R202	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R203	RC003630	BRFC011094Z	CARBON FIXED CHIP	1 1/10W J TAPING
R205	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R206	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R207	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R208	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R210	RC005262	BRFC168234Z	CARBON FIXED CHIP	82K 1/16W J TAPING
R211	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R212	RC005432	BRFC161544Z	CARBON FIXED CHIP	150K 1/16W J TAPING
R213	RC008935	BRFC012294Z	CARBON FIXED CHIP	2.2 1/10W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R214	RC008935	BRFC012294Z	CARBON FIXED CHIP	2.2 1/10W J TAPING
R215	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R216	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R217	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R218	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R219	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R222	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R223	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R224	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R225	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R227	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R228	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R229	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R230	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R231	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R232	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R233	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R234	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R235	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R236	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R237	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R238	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R239	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R240	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R241	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R242	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R243	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R245	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R246	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R247	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R248	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R249	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R250	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R251	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R252	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R253	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R254	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R255	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R256	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R257	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R258	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J TAPING
R259	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J TAPING
R260	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R261	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R262	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R263	RC008091	BRFC165614Z	CARBON FIXED CHIP	560 1/16W J TAPING
R264	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R265	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R266	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R267	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R268	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R269	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R270	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R271	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R272	RC008286	BRFC162744Z	CARBON FIXED CHIP	270K 1/16W J TAPING
R273	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R274	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R275	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R276	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R277	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R278	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R279	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R280	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R281	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R282	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R284	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R285	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R286	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R287	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R288	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R290	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R292	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R293	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R294	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R295	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R296	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R297	RC002898	BRFC010004Z	CARBON FIXED CHIP	0 1/10W J TAPING
R298	RC002799	BRFC181024Z	CARBON FIXED CHIP	1K 1/8W J TAPING
R600	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R601	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R602	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R603	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R604	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R605	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R606	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R607	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R608	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R609	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R610	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R611	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R612	RC008029	BRFC163924Z	CARBON FIXED CHIP	3.9K 1/16W J TAPING
R613	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R614	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R615	RC005247	BRFC162214Z	CARBON FIXED CHIP	220 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R616	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R617	RC008454	BRFC165604Z	CARBON FIXED CHIP	56 1/16W J TAPING
R618	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R619	RC005278	BRFC161244Z	CARBON FIXED CHIP	120K 1/16W J TAPING
R620	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R621	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R622	RC005284	BRFC163334Z	CARBON FIXED CHIP	33K 1/16W J TAPING
R623	RC005249	BRFC162244Z	CARBON FIXED CHIP	220K 1/16W J TAPING
R624	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R626	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R627	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R628	RC005288	BRFC168244Z	CARBON FIXED CHIP	820K 1/16W J TAPING
R629	RC008455	BRFC168204Z	CARBON FIXED CHIP	82 1/16W J TAPING
R630	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R631	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R632	RC005262	BRFC168234Z	CARBON FIXED CHIP	82K 1/16W J TAPING
R633	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R634	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R635	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R636	RC005283	BRFC162734Z	CARBON FIXED CHIP	27K 1/16W J TAPING
R637	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R638	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R639	RC005284	BRFC163334Z	CARBON FIXED CHIP	33K 1/16W J TAPING
R640	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R641	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R642	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R643	RC008029	BRFC163924Z	CARBON FIXED CHIP	3.9K 1/16W J TAPING
R644	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R645	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R646	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R647	RC005259	BRFC166814Z	CARBON FIXED CHIP	680 1/16W J TAPING
R648	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R649	RC005284	BRFC163334Z	CARBON FIXED CHIP	33K 1/16W J TAPING
R650	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R651	RC005256	BRFC164724Z	CARBON FIXED CHIP	4.7K 1/16W J TAPING
R652	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R653	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R654	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R655	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R656	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R658	RC005286	BRFC165644Z	CARBON FIXED CHIP	560K 1/16W J TAPING
R659	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R660	RC005247	BRFC162214Z	CARBON FIXED CHIP	220 1/16W J TAPING
R661	RC005249	BRFC162244Z	CARBON FIXED CHIP	220K 1/16W J TAPING
R662	RC005252	BRFC163314Z	CARBON FIXED CHIP	330 1/16W J TAPING
R663	RC005255	BRFC164714Z	CARBON FIXED CHIP	470 1/16W J TAPING
R664	RC005245	BRFC161834Z	CARBON FIXED CHIP	18K 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R665	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R666	RC005280	BRFC161534Z	CARBON FIXED CHIP	15K 1/16W J TAPING
R667	RC005258	BRFC164744Z	CARBON FIXED CHIP	470K 1/16W J TAPING
R668	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R669	RC005253	BRFC163324Z	CARBON FIXED CHIP	3.3K 1/16W J TAPING
R670	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R671	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R672	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R673	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R674	RC008765	BRFC161004Z	CARBON FIXED CHIP	10 1/16W J TAPING
R675	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R676	RC008030	BRFC165624Z	CARBON FIXED CHIP	5.6K 1/16W J TAPING
R677	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R678	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R679	RC005248	BRFC162234Z	CARBON FIXED CHIP	22K 1/16W J TAPING
R680	RC005246	BRFC162204Z	CARBON FIXED CHIP	22 1/16W J TAPING
R681	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R682	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R683	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R684	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R685	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R686	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R687	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R688	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R689	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R690	RC005261	BRFC168224Z	CARBON FIXED CHIP	8.2K 1/16W J TAPING
R691	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R693	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R694	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R695	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R696	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R697	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R698	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R699	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R700	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R701	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R702	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R703	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R704	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R705	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R706	RC005242	BRFC161044Z	CARBON FIXED CHIP	100K 1/16W J TAPING
R707	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R708	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R709	RC005281	BRFC162224Z	CARBON FIXED CHIP	2.2K 1/16W J TAPING
R751	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R752	RC008493	BRFC183914Z	CARBON FIXED CHIP	390 1/8W J TAPING
R756	RC008733	BRFC161814Z	CARBON FIXED CHIP	180 1/16W J TAPING

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
R760	RC002502	BRFC181044Z	CARBON FIXED CHIP	100K 1/8W J TAPING
R761	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R762	RC005285	BRFC165634Z	CARBON FIXED CHIP	56K 1/16W J TAPING
R763	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R764	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R765	RC008766	BRFC161224Z	CARBON FIXED CHIP	1.2K 1/16W J TAPING
R766	RC005260	BRFC166834Z	CARBON FIXED CHIP	68K 1/16W J TAPING
R767	RC005257	BRFC164734Z	CARBON FIXED CHIP	47K 1/16W J TAPING
R768	RC005239	BRFC161014Z	CARBON FIXED CHIP	100 1/16W J TAPING
R774	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R775	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R778	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R779	RC001788	BRFC181034Z	CARBON FIXED CHIP	10K 1/8W J TAPING
R780	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R781	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R782	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R783	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R784	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R785	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R793	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R797	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R798	RC005240	BRFC161024Z	CARBON FIXED CHIP	1K 1/16W J TAPING
R799	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R950	RC002806	BRFC181844Z	CARBON FIXED CHIP	180K 1/8W J TAPING
R952	RC008479	BRFC161844Z	CARBON FIXED CHIP	180K 1/16W J TAPING
R953	RC005241	BRFC161034Z	CARBON FIXED CHIP	10K 1/16W J TAPING
R954	RC008556	BRPA611054Z	CARBON AX TS 26	1M 1/6W J TAPING
R955	RC008734	BRFC162254Z	CARBON FIXED CHIP	2.2M 1/16W J TAPING
R956	RC002812	BRFC183324Z	CARBON FIXED CHIP	3.3K 1/8W J TAPING
R957	RC008557	BRPA611524Z	CARBON AX TS 26	1.5K 1/6W J TAPING
R958	RC008029	BRFC163924Z	CARBON FIXED CHIP	3.9K 1/16W J TAPING
R959	RC008559	BRPA616824Z	CARBON AX TS 26	6.8K 1/6W J TAPING
R960	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
R961	RC002899	BRFC180004Z	CARBON FIXED CHIP	0 1/8W J TAPING
R962	RC005311	BRFC160004Z	CARBON FIXED CHIP	0 1/16W J TAPING
RT1	RC008287	BRTY0572204	SEMI-FIXED	RT-572 NVZ6TL1B204 200KB
RT2	RC004606	BRTY0572104	SEMI-FIXED	RT-572 NVZ6TL1B104 100KB
RT3	RC005661	BRTY0572203	SEMI-FIXED	RT-572 NVZ6TL1B203 20KB
RT601	RC008328	BRTY0569224	SEMI-FIXED	RT-569 POZ3AN-1-224N-T00
RT602	RC008326	BRTY0569104	SEMI-FIXED	RT-569 POZ3AN-1-104N-T00
RT603	RC008327	BRTY0569223	SEMI-FIXED	RT-569 POZ3AN-1-223N-T00
SWITCHES				
S1	RC003604	BSWY0755001		SW-755 SBHA12B-06
S2	RC005118	BSWY0756001	SLIDE	SW-756 SBHA13B-06
S4	RC005118	BSWY0756001	SLIDE	SW-756 SBHA13B-06
S5	RC003604	BSWY0755001		SW-755 SBHA12B-06

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
WIRES				
W1	RC008406	CUQK009022Z	WIRE W-005	UL 1571 #26 5- 90- 5 BLK
W2	RC008405	CUQB009022Z	WIRE W-005	UL 1571 #26 5- 90- 5 RED
W3	RC008359	CUQK015033Z	WIRE W-005	UL 1571 #26 7-150- 7 BLK
W4	RC008358	CUQB015033Z	WIRE W-005	UL 1571 #26 7-150- 7 RED
W202	RC004204	CZDZ071963A	WIRES ASSEMBLED	W-071963A
W601	RC005699	CZDZ072147Z	WIRES ASSEMBLED	W-072147
W701	RC008503	CUKJ006021Z	WIRE	UL1007 #28 5-60-3 WHT
W702	RC008504	CUKK006021Z	WIRE	UL 1007 #28 5- 60- 3 BLK
W801	RC008581	CUPB007011Z	WIRE W-004	UL 1571 #26 3- 70- 3 RED
W802	RC001317	CUPK007011Z	WIRE W-004	UL 1571 #26 3- 70- 3 BLK
WA901	RC008231	BWZY1401001	CORD:TEL	⚠ WZ-1401 1850 W/P
CRYSTALS				
X1	RC008478	BQXY0724001	CRYSTAL	QX-724 10.1MHZ
X2	RC003599	BQXY0492001	CRYSTAL	QX-492 3.579545M
X201	RC008492	BQXY0722001	CRYSTAL	QX-722 3.6864MHZ
X601	RC008453	BQXY0714001	CRYSTAL	QX-714 4.192MHZ CSA-309
X602	RC008285	BQXY0721001	CRYSTAL	QX-721 10.100000MHZ
OTHER ELECTRICAL PARTS				
AD901	RC003328	BADY0318001	AC ADAPTOR	⚠ AD-318 H-A1-2178A
AT701	RC008310	BATY0369001	ANTENNA	⚠ AT-369 AT-36
B301	RC008387	AC218BLBB	RF MODULE (BASE)	
B501	RC008389	AC218BLPB	RF MODULE (HANDSET)	
BT901	RC004931	BBTY0403001	BATTERY	⚠ BT-403 GP60AAK3BMX
DP601	RC008450	BDLY0193001	LIQUID CRYSTAL DISPLAY	DL-193 NCOG068
FC701	RC008494	BWFY3090955	FLAT CABLE	WF-309 4-95-4 20P
MC1	RC004062	BMKY0475001	MICROPHONE	MK-475 WM-034BZ
MC601	RC004062	BMKY0475001	MICROPHONE	MK-475 WM-034BZ
RL1	RC000867	BRLY0042001	RELAY	⚠ RL-042 OMR-108H
SP701	RC001282	BSPY0166001	SPEAKER	SP-166 C060A20G0060
SP801	RC008336	BSPY0409001	SPEAKER	⚠ SP-409 DTR169HP-005
Y601	RC008787	BYYY1392001	BUZZER	YY-1392 ST-1285 APH
PACKING PARTS				
	RC008427	WSLV482644Z	AIR BAG	
	RC005198	UDZZ73535ZZ	CAUTION BELT	
	RC004291	WETC420086Z	COVER:ANT.	EPE
	RC008237	WBXZ342813Z	DISPLAY BOX	
	RC008422	RETC443314Z	DOUBLE SIDED TAPE	
	RC004688	PLBB454286Z	LABEL:BARCODE	PAPER
	RC004689	PLBB454287Z	LABEL:BARCODE	PAPER
	RC008238	UCZZ01223BZ	OWNER'S MANUAL	
	RC008239	UCZZ69223BZ	QUICK REFERENCE GUIDE	
	RC008573	WCTZ442814Z	SHIPPING CARTON BOX	
	RC008425	WSLV342836Z	SLEEVE	
	RC008426	WSLV443144Z	SLEEVE	

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION	
	RC008719	VNYH1103000	VINYL BAG	100X300X0.05T HIPE
	RC005455	VNYH1304000	VINYL BAG	300X400X0.05T HIPE
	RC008783	VNYL2304060	VINYL BAG	300X400X600X0.07T
	RC008353	VNYL3101000	VINYL BAG	100X100X0.1T
	RC008423	VNYL3102500	VINYL BAG	100X250X0.1T

ASSEMBLY PARTS LIST

NOTE: Following part numbers are not available as replacement parts.
Order parts necessary for repair or contact the Toshiba Factory Service Center.

LOC. NO.	PART NO.	REF. NO.	DESCRIPTION
	RC008508	AC222ZLBA	MAIN PCB ASSEMBLY, BASE
	RC008509	AC222ZLBC	KEY PCB ASSEMBLY, BASE
	RC008510	AC222ZLPA	MAIN PCB ASSEMBLY, HANDSET

SPECIFICATIONS

MEASUREMENT CONDITIONS

1. Standard Voltage :Portable Unit .... DC 3.8V ± 0.025V
   :Base Unit .... AC 120V ± 3V 60Hz
2. Temperature :25℃ ± 5℃
3. Channel

FCC CH	Portable(TX Frequency)	Base(TX Frequency)
1	904.052470MHz	925.997470MHz
2	902.102465MHz	926.047470MHz
3	902.152465MHz	926.097470MHz
4	902.202465MHz	926.147470MHz
5	902.252465MHz	926.197470MHz
6	902.302465MHz	926.247469MHz
7	902.352465MHz	926.297469MHz
8	902.402465MHz	926.347469MHz
9	902.452465MHz	926.397469MHz
10	902.502466MHz	926.447469MHz
11	902.552466MHz	926.497469MHz
12	902.602466MHz	926.547469MHz
13	902.652466MHz	926.597469MHz
14	902.702466MHz	926.647468MHz
15	902.752466MHz	926.697468MHz
16	902.802466MHz	926.747468MHz
17	902.852467MHz	926.797468MHz
18	902.902467MHz	926.847468MHz
19	902.952467MHz	926.897468MHz
20	903.002467MHz	926.947468MHz
21	903.052467MHz	926.997467MHz
22	903.102467MHz	927.047467MHz
23	903.152467MHz	927.097467MHz
24	903.202468MHz	927.147467MHz
25	904.102470MHz	927.197467MHz
26	903.302468MHz	927.247467MHz
27	903.352468MHz	927.297467MHz
28	903.402468MHz	927.347466MHz
29	903.452468MHz	927.397466MHz
30	903.502468MHz	927.447466MHz
31	903.552468MHz	927.497466MHz
32	903.602469MHz	927.547466MHz
33	903.652469MHz	927.597466MHz
34	903.702469MHz	927.647466MHz
35	903.752469MHz	927.697466MHz
36	903.802469MHz	927.747465MHz
37	903.852469MHz	927.797465MHz
38	903.902469MHz	927.847465MHz
39	903.952470MHz	927.897465MHz
40	904.002470MHz	927.947465MHz

4. Tel. Line Voltage/Load : DC 48V ± 2V / 600 OHMS
5. Ring Frequency : 20 Hz
6. Ring Duration : 2 Sec ON, 4 Sec OFF
7. Standard Deviation : 1KHz ± 8KHz Dev.
8. Secure Code : 65536 Combinatin
9. Method of Measurement : According to EIA Standard RS-316A
10. Portable RX AF Load : 150 OHMS
11. Base Speaker Load : 32 OHMS

RECEIVER		UNIT	NOMINAL	LIMIT
1. Sensitivity 12 dB SINAD	with CCITT Filter	dBm	-115	< -107
2. Frequency Response (Ref:1kHz)	0.3kHz	dB	-2.0	-6.0~+2.0
	3.0kHz	dB	-6.0	-10.0~-2.0
3. Distortion at 1 mV RF Input		%	1.5	< 5
4. S/N ratio at 1 mV RF Input	with CCITT Filter	dB	70	60 <
5. Selectivity (NQ20dB)	6dB Bandwidth +	kHz	15	10 <
	6dB Bandwidth –	kHz	15	10 <
6. Image Rejection Ratio	SINAD 12dB with CCITT Filter			
	1st Image	dB	35	30 <
	2nd Image	dB	55	30 <
7. Tel Line Output Level (600Ω Load)		dBm	-10	-13~-7
8. Ringer Level at 30cm from Speaker (Bell input)				
	Ringer Frequency : 900Hz + 450Hz	dBspl	85	75 <

TRANSMITTER		UNIT	NOMINAL	LIMIT
1. RF Power (50Ω Load)		dBm	-6.5	-9.5~-3.5
2. Modulation Sensitivity		dBm	-20	-24~-16
3. Frequency Response (Ref:1kHz)	0.3kHz	dB	0.0	-4.0~+4.0
	3.0kHz	dB	-1.5	-5.5~+2.5
4. Frequency Tolerance (25°C)		Hz	0	-2500~+2500
5. Code Deviation		kHz	8.0	< 11
6. Distortion		%	1.5	< 5
7. Adjacent CH Power	(+)	dB	55	50 <
	(–)	dB	55	50 <
8. S/N Ratio	with CCITT Filter	dB	35	30 <

TELEPHONE LINE	UNIT	NOMINAL	LIMIT
1. Off-hook Impedance (at 1kHz)	OHM	1000	500~1500
2. Off-hook DC Resistance (DC 40mA)	OHM	250	100~300
3. On-hook Impedance 20Hz (75Vrms)	kOHM	25	10 <
4. Minimum Ringer Input Level (at 20Hz)	Vrms	30	< 40
5. Pulse Dialing			
a. Dialing Rate (@10pps)	pps	10	8~11
b. Make Ratio (@10pps)	%	39	36~42
6. DTMF Output (@600Ω Load)			
a. DTMF Frequency			
Row 1	Hz	697	687~707
Row 2	Hz	770	759~781
Row 3	Hz	852	840~864
Row 4	Hz	941	927~955
Column 1	Hz	1209	1191~1227
Column 2	Hz	1336	1316~1356
Column 3	Hz	1477	1455~1499
b. Signal Level of Dual Tone	dBm	-3	< 0
c. Signal Length	mSec	100	90 <
d. Interdigital Pause	mSec	100	80 <

SPEAKER PHONE	UNIT	NOMINAL	LIMIT
1. Microphone Sensitivity (-20 dBm TEL Output)			
(Measured as soon as signal on)	mV	2.0	1.0~4.0
2. Receiver Response Audio Output (-30 dBm TEL Input)			
(Measured as soon as signal on)	mV	600	340~1050

PORTABLE UNIT

RECEIVER		UNIT	NOMINAL	LIMIT
1. Sensitivity 12 dB SINAD	with CCITT Filter	dBm	-115	< -107
2. Frequency Response (Ref:1kHz)	0.3kHz	dB	-2.0	-5.0~+1.0
	3.0kHz	dB	-4.0	-7.0~+1.0
3. Audio Output Level	VOL. LOUD	dB	+15	VOL. LOW +15±2
	VOL. HIGH	dB	+10	VOL. LOW +10±2
	VOL. MEDIUM	dB	+5	VOL. LOW +5±2
	VOL. LOW	dBV	-27	-23~-31
4. Distortion at 1 mV RF Input		%	2.0	< 5
5. S/N ratio at 1 mV RF Input	with CCITT Filter	dB	70	60 <
6. Selectivity (NQ20dB)	Bandwidth +	kHz	15	10 <
	Bandwidth –	kHz	15	10 <
7. Image Rejection Ratio	SINAD 12dB with CCITT Filter			
	1st Image	dB	30	20 <
	2nd Image	dB	45	30 <
8. Ringer Level at 30cm from Speaker				
	2 TONE VOL HI	DBSPL	80	75 <
	2 TONE VOL LO	DBSPL	70	60 <
	3 TONE VOL HI	DBSPL	75	60 <
	3 TONE VOL LO	DBSPL	70	50 <

TRANSMITTER		UNIT	NOMINAL	LIMIT
1. RF Power (50Ω Load)		dBm	-5.0	-8.0~-2.0
2. Modulation Sensitivity		mV	9	6.5~13
3. Frequency Response (Ref:1kHz)	0.3kHz	dB	0.0	-4.0~+4.0
	3.0kHz	dB	-1.0	-5.0~+3.0
4. Frequency Tolerance (25°C)		Hz	0	-2500~+2500
5. Code Deviation		kHz	8.0	< 11
6. Distortion		%	1.5	< 5
7. Adjacent CH Power	(+)	dB	55	50 <
	(−)	dB	55	50 <
8. S/N Ratio	with CCITT Filter	dB	35	30 <

POWER CONSUMPTION	UNIT	NOMINAL	LIMIT
1. Base Unit (with AC Adaptor, Answer off)			
a. Stand-by Charge Off	mA	150	< 180
b. Stand-by Charge On	mA	225	190~270
c. Talk	mA	195	< 230
2. Charge Current (at BATTERY)	mA	53	40~75
3. Portable Unit			
a. Stand-by	mA	2.5	< 4
b. Talk	mA	70	< 105
4. Battery Low Detect Voltage	V	3.3	3.2~3.4

FSK SENSITIVITY (ON HOOK)	UNIT	NOMINAL	LIMIT
1. Minimum Acceptable Signal Level with 25 dB S/N Ratio	dBm	-45	< -42
2. Maximum Acceptable Signal Level with 25 dB S/N Ratio	dBm	0	-6 <

OTHERS

1. Battery : Ni-Cd Battery 600mAH (@1.2×3=3.6V)
2. Memory : 10 Memories (Name: 14 characters, Phone Number: 20 Digits) +
   1 Redial Memory (32 Digits) on Portable +
   50 CID Memories (Name: 15 characters, Phone Number: 15 Digits)
3. Operating Temperature : -10°C ~ +50°C
4. Storage Temperature : -20°C ~ +60°C

REQUIREMENTS COMPLIANCE

1. Unit is designed to fully meet with UL1459 and FCC Rules, Part 15 and 68

TOSHIBA AMERICA CONSUMER PRODUCTS, INC.
82 TOTOWA ROAD, WAYNE, N.J. 07470

TOSHIBA HAWAII, INC.
327 KAMAKEE ST., HONOLULU, H.I. 96814

TOSHIBA OF CANADA, LIMITED
191 McNABB ST., MARKHAM, ONTARIO, L3R 8H2 CANADA